

May 5, 2016

Sent Via Federal Express

Mr. Jay Nickerson
New Jersey Department of Environmental Protection
Site Remediation Program
Bureau of Case Management
401 E. State Street, 6th Floor
Trenton, New Jersey 08625

*Re: Arsynco, Inc.
 Foot of 13th Street
 Carlstadt, Bergen County
 SRP PI# 024248*

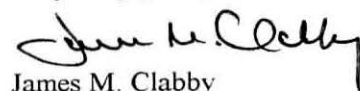
Dear Mr. Nickerson:

Enclosed please find three (3) paper copies and one electronic copy on CD-ROM in Adobe portable document format (PDF) of each of the following documents:

- Remedial Investigation Report Addendum (May 2016)
- Case Inventory Document (CID) - included after cover page of RIR
- Cover/Certification Form
- Receptor Evaluation Form (Updated RE)

Should you have any questions or require any additional information with regard to this matter, please feel free to contact me at your earliest convenience.

Very truly yours,



James M. Clabby
President, LSRP

enclosures



New Jersey Department of Environmental Protection
Site Remediation Program

COVER/CERTIFICATION FORM

(Submit with Remedial Phase Report, Receptor Evaluation, and CEA Forms)

Date Stamp
(For Department use only)

SECTION A. SITE INFORMATION

Site Name: Arsynco, Inc.

AKAs: _____

Street Address: 511 Thirteenth Street (Foot of 13th Street)

Municipality: Carlstadt (Township, Borough or City)

County: Bergen Zip Code: 07072

Program Interest (PI) Number(s): 024248

Case Tracking Number(s) for this submission: ISRA # 93024

Date Remediation Initiated Pursuant to N.J.A.C. 7:26C-2: 01/11/1993

State Plane Coordinates for a central location at the site: Easting: 607497.248 Northing: 729507.034

List current Municipal Block and Lot Numbers of the Site:

Block # <u>91</u>	Lot #(s) <u>1</u>	Block # _____	Lot #(s) _____
Block # _____	Lot #(s) _____	Block # _____	Lot #(s) _____
Block # _____	Lot #(s) _____	Block # _____	Lot #(s) _____
Block # _____	Lot #(s) _____	Block # _____	Lot #(s) _____

SECTION B. SUBMISSION STATUS

1. Indicate how the Electronic Data Deliverable (EDD) for this submission is being provided to the NJDEP:

- ☒ Via Email at srpedd@dep.state.nj.us (attach NJDEP confirmation email); or
☐ CD (attach to this submission)
☐ Not Applicable – No EDD

2. Complete the following Submission and Permit Status Table:

	N/A	Included in this Submission	Previously Submitted	Date of Submission	Date of Revised Submission	Date of Previous NJDEP Approval	Date of Document Withdrawal
Remedial Phase Documents							
Preliminary Assessment Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	06/21/1993			
Site Investigation Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	06/21/1993			
Remedial Investigation Report	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	06/01/1997	05/01/2016		
Remedial Action Work Plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/31/2003	12/02/2014	05/26/2006	
Remedial Action Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Response Action Outcome	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Other Submissions							
Alternative Soil Remediation Standard and/or Screening level Application Form	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Case Inventory Document		<input checked="" type="checkbox"/>		05/01/2016			
Classification Exception Area / Well Restriction Area (CEA/WRA)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	02/07/2013	12/02/2014	05/29/2015	
Discharge to Ground Water Permit by Rule Authorization Request	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

IEC Engineered System Response Action Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Immediate Environmental Concern Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
LNAPL Interim Remedial Measure Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Public Notification	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	08/31/2009			
Receptor Evaluation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	02/23/2012	05/01/2016		
Technical Impracticability Determination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Vapor Concern Mitigation Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Permit Application – list:	<input type="checkbox"/>						
Freshwater Wetlands GP #4		<input type="checkbox"/>	<input checked="" type="checkbox"/>	10/21/2014			
Coastal GP # 15		<input type="checkbox"/>	<input checked="" type="checkbox"/>	10/21/2014			
Waterfront Development Permit		<input type="checkbox"/>	<input checked="" type="checkbox"/>	10/21/2014			
Indiv. Flood Hazard Area Permit		<input type="checkbox"/>	<input checked="" type="checkbox"/>	10/21/2014			
Radionuclide Remedial Action Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Radionuclide Remedial Action Workplan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Radionuclide Remedial Investigation Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Radionuclide Remedial Investigation Workplan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

SECTION C. SITE USE

Current Site Use: (check all that apply)

- ☐ Industrial
☐ Residential
☐ Commercial
☐ School or child care
☐ Other: _____
- ☐ Agricultural
☐ Park or recreational use
☒ Vacant
☐ Government

Intended Future Site Use, if known: (check all that apply)

- ☐ Industrial
☐ Residential
☐ Commercial
☐ School or child care
☐ Other: _____
- ☐ Park or recreational use
☐ Vacant
☐ Government
☒ Future site use unknown

SECTION D. CASE TYPE: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Administrative Consent Order (ACO) | <input type="checkbox"/> Landfill (SRP subject only) |
| <input type="checkbox"/> Brownfield Development Area (BDA) | <input type="checkbox"/> Regulated Underground Storage Tank (UST) |
| <input type="checkbox"/> Child Care Facility | <input type="checkbox"/> Remediation Agreement (RA)/Remediation Certification |
| <input type="checkbox"/> Chrome Site (Chromate chemical production waste) | <input type="checkbox"/> School Development Authority (SDA) |
| <input type="checkbox"/> Coal Gas | <input type="checkbox"/> School facility |
| <input type="checkbox"/> Due Diligence with RAO | <input type="checkbox"/> Spill Act Defense – Government Entity |
| <input type="checkbox"/> Hazardous Discharge Remediation Fund (HDSRF) Grant/Loan | <input type="checkbox"/> Spill Act Discharge |
| <input checked="" type="checkbox"/> ISRA | <input type="checkbox"/> UST Grant/Loan |
| | <input type="checkbox"/> Other: _____ |

Federal Case (check all that apply)

- ☒ RCRA GPRA 2020
 ☐ CERCLA/NPL
 ☐ USDOD
 ☐ USDOE

1. Is the party conducting remediation a government entity? ☐ Yes ☒ No

If "Yes," check one: ☐ Federal ☐ State ☐ Municipal ☐ County

SECTION E. PUBLIC FUNDS

Did the remediation utilize public funds? ☐ Yes ☒ No

If "Yes," check applicable:

- | | | |
|--------------------------------------|--|---|
| <input type="checkbox"/> UST Grant | <input type="checkbox"/> UST Loan | <input type="checkbox"/> Brownfield Reimbursement Program |
| <input type="checkbox"/> HDSRF Grant | <input type="checkbox"/> HDSRF Loan | <input type="checkbox"/> Landfill Reimbursement Program |
| <input type="checkbox"/> Spill Fund | <input type="checkbox"/> Schools Development Authority | <input type="checkbox"/> Environmental Infrastructure Trust |

SECTION F. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Arsynco, Inc.

Representative First Name: Edward

Representative Last Name: Kelly

Title: Assistant Treasurer

Phone Number: (516) 627-6000

Ext: _____

Fax: _____

Mailing Address: c/o Aceto Corp. 4 Tri Harbor Ct.

City/Town: Port Washington

State: NY

Zip Code: 11050

Email Address: EKelly@aceto.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: _____

Date: 4/20/16

Name/Title: Edward Kelly / Asst. Treasurer

For CEA Submissions:

☒ Check this box if the person above is also the property owner of the site or their representative. If this person is not the site property owner, please ensure the site property owner's name and address is in the first line of the table in Section E.2 of the Classification Exception Area / Well Restriction Area (CEA/WRA) Fact Sheet Form.

SECTION G. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENTLSRP ID Number: 573690First Name: JamesLast Name: ClabbyPhone Number: (732) 295-2144

Ext: _____

Fax: (732) 295-2150Mailing Address: 2109 Bridge Ave., Bulding BCity/Town: Point PleasantState: NJZip Code: 08742Email Address: jclabby@jmcenvironmental.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with section 14 of P.L.2009 c.60 (N.J.S.A. 58:10C-14), and paragraphs (1) and (2) of subsection b. of section 30 of P.L.2009 c.60 (N.J.S.A. 58:10B-1.3b(1) and (2)).

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:☒ *directly oversaw and supervised all of the referenced remediation, and/or*☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

I believe that the information contained herein, and including all attached documents, is true, accurate and complete.

It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: _____

Date: 05/04/2016LSRP Name/Title: James M. Clabby / PresidentCompany Name: JMC Environmental Consultants, Inc.

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420



New Jersey Department of Environmental Protection
Site Remediation Program

RECEPTOR EVALUATION (RE) FORM

Date Stamp
(For Department use only)

SECTION A. SITE

Site Name: Arsynco, Inc.

Program Interest (PI) Number(s): 024248

Case Tracking Number(s) for this submission: 93024

**This form must be attached to the Cover/Certification Form
if not submitted through the RIR Online Service**

Indicate the type of submission:

☐ Initial RE Submission

☒ Updated RE Submission

Indicate the reason for submission of an updated RE form

☐ Submission of an Immediate Environmental Concern (IEC) source control report;

☒ Submission of a Remedial Investigation Report;

☐ Submission of a Remedial Action Report;

Check if included in updated RE

☐ The known concentration or extent of contamination in any medium has increased;

☐ A new AOC has been identified;

☐ A new receptor is identified;

☐ A new exposure pathway has been identified.

SECTION B. ON SITE AND SURROUNDING PROPERTY USE

1. Identify any sensitive populations/uses that are currently on-site or surrounding property usage within 200 feet of the site boundary (check all that apply):

	On-site	Off-site
None of the following	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Residences or residential property	<input type="checkbox"/>	<input type="checkbox"/>
Public or Private Schools grades K-12	<input type="checkbox"/>	<input type="checkbox"/>
Child care centers	<input type="checkbox"/>	<input type="checkbox"/>
Public parks, playgrounds or other recreation areas	<input type="checkbox"/>	<input type="checkbox"/>
Other sensitive population use(s) Explain	<input type="checkbox"/>	<input type="checkbox"/>

If any of the above applies, attach a list of addresses, facility names, type of use, and a map depicting each location relative to the site. Refer to Table 1 and Figure 1 in Attachment A.

2. Current site uses (check all that apply):

☐ Industrial

☐ Residential

☐ Commercial

☐ Agricultural

☐ School or child care

☐ Government

☐ Park or recreational use

☒ Vacant

☐ Other: _____

3. Planned future site uses and off-site use within 200 ft of site boundary (check all that apply):

☐ Industrial

☐ Residential

☐ Commercial

☐ Agricultural

☐ School or child care

☐ Government

☐ Park or recreational use

☐ Vacant

☐ Other: _____

Provide a map depicting the location of the proposed changes in land use.

SECTION C. DESCRIPTION OF CONTAMINATION

1. Identify if any of the following exist at the site (check all that apply):

- ☐ Free product [N.J.A.C. 7:26E-1.8] identified is ☐ LNAPL* or ☐ DNAPL**. Date identified: _____
- ☒ Residual product [N.J.A.C. 7:26E-1.8]
- ☒ Other high concentration source materials not identified above (e.g., buried drums, containers, unsecured friable asbestos) Possible residual product (toluene & xylenes) present in shallow fill near MW-11S. Possible CVOC residual product in deep GW near wells 11D, 38D, 22D, 39D, 8D. However, free product has never been measured in wells.
- Explain: Waste material with PCB levels is located in shallow fill material in SE part of site.

* LNAPL – measured thickness of .01 feet or more

**DNAPL – See US EPA DNAPL Overview

2. Soil Migration Pathway

Has soil contamination been delineated to the applicable Direct Contact Soil Remediation Standard? ☒ Yes ☐ No

Are all soils either below the applicable Direct Contact Criteria or under an institutional control (i.e. deed notice)? ☐ Yes ☒ No

3. If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section D. Otherwise attach a brief summary of all currently available data and information to be included in the site investigation or remedial investigation report.

SECTION D. GROUND WATER USE

1. Has the requirement for ground water sampling been triggered? ☒ Yes ☐ No ☐ Unknown
If "No," proceed to Section F. If "Unknown," explain: _____

2. Is Ground water contaminated above the Ground Water Remediation Standards [N.J.A.C.7:9C]? ☒ Yes ☐ No ☐ Unknown

Or ☐ Awaiting laboratory data with the expected due date: _____

If "Yes," provide the date that the laboratory data was available and confirmed contamination above the Ground Water Remediation Standards. Date: 06/30/1991

If "Unknown," explain: _____

If "No," or awaiting laboratory data proceed to Section F.

3. Has ground water contamination been delineated to the applicable Remediation Standard? ☒ Yes ☐ No

4. Has a well search been completed? ☒ Yes ☐ No

Date of most recent or updated well search: 10/21/2014

Identify if any of the following conditions exist based on the well search [N.J.A.C.7:26E-1.14(a)] (check all that apply):

- ☐ Potable wells located within 500 feet from the downgradient edge of the currently known extent of contamination.
- ☐ Potable well located 250 feet upgradient or 500 feet side gradient of the currently known extent of contamination.
- ☐ Ground water contamination is located within a Tier 1 wellhead protection area (WHPA).

5. Is a completed Well Search Spreadsheet or historical well search table attached and has an electronic copy of the spreadsheet been submitted to srpgis_wrs@dep.state.nj.us. ☐ Yes ☒ No

If "No," explain: No additional, applicable wells were identified in the most recent well search.

6. Are any private potable or irrigation wells located within 1/2 mile of the currently known extent of contamination? ☒ Yes ☐ No

If "Yes," was a door to door survey completed? ☒ Yes ☐ No

If survey was not completed explain: _____

7. Has sampling been conducted of ☐ potable well(s) and/or ☐ non-potable use well(s)? ☐ Yes ☒ No

If "No," provide justification then proceed to Section E.

No potable wells within 1/2 mile. Industrial/irrigation wells are not located in position of concern with respect to site.

8 Has contamination been identified in potable well(s) above Ground Water Remediation Standards that is not suspected to be from the site? (If "Yes," provide justification) ☐ Yes ☐ No

9 Has contamination been identified in potable well(s) that is above the Ground Water Remediation Standards or Federal Drinking Water Standards? ☐ Yes ☐ No

Provide date laboratory data was received: _____

Or ☐ awaiting laboratory data with the expected due date: _____

If "Yes" for potable well contamination **not attributable to background**, follow the IEC Guidance Document at <http://www.nj.gov/dep/srp/guidance/index.html#iec> for required actions and answer the following:

Has an engineered system response action been completed on all receptors? ☐ Yes ☐ No
Provide a brief narrative description: _____

Date completed: _____ NJDEP Case Manager: _____

10. Were Non-potable use well(s) sampled and results were above Class II Ground Water Remediation Standards? ☐ Yes ☐ No

Provide date laboratory data was received: _____

Or ☐ awaiting laboratory data with the expected due date: _____

11. Has the ground water use evaluation been completed? ☒ Yes ☐ No

SECTION E. VAPOR INTRUSION (VI)

1. Contaminants present in ground water exceed the Vapor Intrusion Ground Water Screening Levels that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance). ... ☒ Yes ☐ No ☐ Unknown
Or ☐ Awaiting laboratory data and the expected due date: _____ However, not related to site.

Provide the date that the laboratory data was available and confirmed contamination above the Vapor Intrusion Trigger Levels. Date: 06/30/1991

2. Other existing conditions that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance)

- ☐ Wet basement or sump containing free product or ground water containing volatile organics
- ☐ Methane generating conditions causing oxygen deficient or explosion concern
- ☐ Other human or safety concern from the VI pathway (i.e. elemental mercury, unsaturated contamination, elevated soil gas or indoor vapor (explain): _____

If you answered "No," or awaiting laboratory data to Question 1., and did not check any boxes in Question 2, proceed to Section F, "Ecological Receptors", otherwise complete the rest of this section.

3. Has ground water contamination been delineated to the applicable Ground Water Vapor Screening Level? ☒ Yes ☐ No

4. Was a site specific screening level, modeling or other alternative approach employed for the VI pathway? ☐ Yes ☒ No

5. Identify and locate on a scaled map any buildings/sensitive populations that exist within the following distances from ground water contamination with concentrations above the Vapor Intrusion Ground Water Screening Levels or specific threats (check all that apply):

- ☐ 30 feet of petroleum free product or dissolved petroleum hydrocarbon contamination in ground water
- ☒ 100 feet of any non-petroleum free product or any non-petroleum dissolved volatile organic ground water contamination (NOTE: No site-related contaminants are located within specified distance. However, contaminants in some site wells that are from off-site sources are within specified distances.)
- ☐ No buildings exist within the specified distances

6. The vapor intrusion pathway is a concern at or adjacent to the site (if "No," attach justification) ☒ Yes ☐ No
See NOTE from item #5, above.

7. Has soil gas sampling of the building(s) been conducted? ☐ Yes ☐ No ☒ N/A
If "No," or "N/A," proceed to #12

8. Has indoor air sampling been conducted at the identified building(s)? ☐ Yes ☒ No
If "No," proceed to #12

9. Has indoor air contamination been identified but not suspected to be from the site?
(if "Yes," attach justification) ☐ Yes ☐ No

10. Indoor air results were above the NJDEP's Rapid Action Levels. ☐ Yes ☐ No

Provide the date that the laboratory data was available. Date: _____

Or ☐ Awaiting laboratory data with the expected due date: _____

NOTE: Soil gas & indoor air sampling
has not been conducted, as no
site-related contaminants are located
within specified distances of buildings.

If "Yes" to #10 above, follow the IEC Guidance Document at
<http://www.nj.gov/dep/srp/guidance/index.html#iec> for required actions.

The IEC engineering system response for control was implemented for all
identified structures ☐ Yes ☐ No

Date: _____ NJDEP Case Manager: _____

11. Indoor air sampling was conducted and results were above the NJDEP's Indoor Air Screening
Levels but at or below the Rapid Action Levels ☐ Yes ☐ No

Provide the date that the laboratory data was available. Date: _____

Or ☐ Awaiting laboratory data with the expected due date: _____

NOTE: Soil gas & indoor air sampling
has not been conducted, as no
site-related contaminants are located
within specified distances of buildings.

If "Yes" to #11 above, answer the following:

Has the Vapor Concern (VC) Response Action Form notifying the NJDEP of the exceedances
been submitted? ☐ Yes ☐ No

Date: _____

Has a plan to mitigate and monitor the exposure been submitted? ☐ Yes ☐ No

Date: _____

Has the Mitigation Response Action Report been submitted? ☐ Yes ☐ No

Date: _____

No site-related contaminants within specified distances.
VI investigation not required for site-related contaminants.

12. Has the vapor intrusion investigation been completed? ☒ Yes ☐ No

If "No", is the vapor intrusion investigation stepping out as part of the site
investigation or remedial investigation. (If "No," attach justification) ☐ Yes ☐ No

SECTION F. ECOLOGICAL RECEPTORS

1. Has an Ecological Evaluation (EE) has been conducted? [N.J.A.C. 7:26E-1.16] ☒ Yes ☐ No
Date conducted: 07/17/2003

2. Do the results of an EE trigger a remedial investigation of ecological receptors? [N.J.A.C. 7:26E-4.8] ☒ Yes ☐ No

3. Has a remedial investigation of ecological receptors been conducted? EE being finalized ☐ Yes ☒ No
Date conducted: _____

4. Provide the following information for any surface water body on or within 200 feet of the site:

Surface Water Body Name	Stream Classification	Antidegradation Designation	Trout Production	Trout Maintenance
Unnamed man-made drainage ditches	FW2-NT/SE2	C2	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

5. Does the site contain any features regulated by the Land Use Regulation Program (LURP)?
(e.g. wetlands, flood hazard area, tidelands, etc.) ☒ Yes ☐ No
If "Yes," identify the type(s) of features: Flood Hazard Area, Freshwater Wetlands, Tidelands
6. Have any formal LURP jurisdiction letters or approvals been issued for the site? ☒ Yes ☐ No
If "Yes," what is the LURP Program Interest (PI) number(s) for the site? 0205-14-0005.1
7. Have any applications for formal LURP jurisdiction letters or approvals been submitted the NJDEP?..... ☒ Yes ☐ No
If "Yes," what is the LURP Program Interest (PI) number(s) for the site? 0205-14-0005.1
8. Is free product or residual product located within 100 feet from an ecological receptor? ☐ Yes ☒ No
9. Does available data indicate an impact on Ecological receptor(s), Surface water, or Sediment?..... ☒ Yes ☐ No
If "Yes,"
- a) Check all that apply:
- ☐ Ecological receptor(s) ☒ Surface water ☒ Sediment
- b) Submit with this evaluation either a technical document that includes contaminant summary information, or a description of the type of contamination, a schedule, and a description of all actions to be taken to mitigate exposure. RIR Addendum being submitted with this updated RE Form.

Completed forms should be sent to the municipal clerk, designate health department, and:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

ATTACHMENT A

TABLE 1
SENSITIVE POPULATION AND RESOURCE CHECKLIST
ARSYNCO, INC. SITE

1) Residences

NONE IDENTIFIED

2) Potable Wells

NONE IDENTIFIED

3) Public/ Private Schools

NONE IDENTIFIED

4) Child Care Facilities

NONE IDENTIFIED

5) Public Parks/ Playgrounds

NONE IDENTIFIED

6) Surface Water Bodies

Unnamed, on-site drainage ditch (along south and east property boundaries)

7) Tier 1 Well-Head Protection Areas

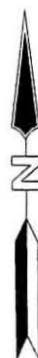
NONE IDENTIFIED

8) Environmental Justice Petition Neighborhoods

NO

9) Language Other than English (Predominantly Spoken)

NO



LEGEND:

- SUBJECT SITE BOUNDARY LINE
- WB WATER BODY - (UNNAMED STREAM)
- VI VAPOR INTRUSION CONCERN

GRAPHIC SCALE



1 inch = 250ft.

**SENSITIVE POPULATION
& RESOURCE LOCATION MAP**

**ARSYNCO, INC. PROPERTY
511 THIRTEENTH ST.
CARLSTADT, N.J.**

FIGURE 1

SCALE: 1" = 250'

JMC ENVIRONMENTAL CONSULTANTS, INC.

2109 BRIDGE AVENUE, BLDG. B
PT. PLEASANT, NEW JERSEY 08742



ICINJDEP

NUDEP makes no representations of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the digital data layers on this map. All scales noted are approximate.

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**REMEDIAL INVESTIGATION REPORT
ADDENDUM**

**ARSYNCO, INC.
Foot of 13th Street
Carlstadt, Bergen County**

ISRA Case # 93024

Prepared for:

**ARSYNCO, INC.
P.O. Box 8
Foot of 13th Street
Carlstadt, New Jersey 07072**

Prepared by:

**JMC Environmental Consultants, Inc.
2109 Bridge Ave., Building B
Point Pleasant, New Jersey 08742**

May 2016

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1.0 INTRODUCTION

JMC Environmental Consultants, Inc. (JMC) was retained by Arsynco, Inc. to provide environmental consulting support services in conjunction with an Industrial Site Recovery Act (ISRA) compliance program (ISRA Case #93024) at Arsynco's former facility located on 13th Street in Carlstadt, Bergen County, New Jersey (the "Site"). A Site location map is provided as Figure 1.

Arsynco had previously been involved in the manufacture of specialty organic chemicals and pharmaceutical intermediates from the time it purchased the property and began operations in 1969 until all operations at the Site ceased in September 1993. However, the Site had been used continuously for a variety of chemical and pharmaceutical manufacturing operations since the early 1900s. Detailed descriptions of Site history were provided in documents previously submitted to NJDEP, including the original Site Evaluation Submission (SES) of March 1993 and the Remedial Investigation Report (RIR) of June 1997.

The following provides a RIR Addendum that addresses the remaining RI issues at the Site, including:

- a) completion of the vertical delineation of VOC contamination in the deep groundwater zone beneath the Site; and,
- b) completion of an order of magnitude comparison and evaluation for the soil AOCs located within the areas where remedial measures were approved by NJDEP via the NJDEP's letter dated May 25, 2006, to the June 2008 Soil Remediation Standards (SRSs).

Regarding item a) above, The February 2013 RIR/RAW and the November 2014 RIR Addendum and Proposed IRM for Deep Groundwater reports submitted to NJDEP documented that shallow zone and deep (D-zone) groundwater had been very well characterized and delineated horizontally at the Site. Arsynco's downgradient perimeter wells (shallow and deep) contain no significant levels of Site-related contaminants. Therefore, in its August 2013 response letter, NJDEP concurred that no further dissolved phase groundwater plume delineation was necessary at this time. However, as summarized in the November 2014 report, Arsynco still decided to install several additional D-zone wells on the Site surrounding main D-zone source area wells 11D, 38D, and 22D in order to better define the on-Site, lateral extent of the D-zone groundwater source area.

In March 2014 Arsynco also installed an additional, triple-cased DD-zone vertical delineation well in the immediate source area near MW-38D. As discussed in the November 2014 report submittal, this DD-zone well (MW-38DD) was sampled and found to contain only slightly elevated levels of methylene chloride, trichloroethene (TCE), and vinyl chloride (VC). The November 2014 report documented completion of the horizontal delineation of contamination in all three (3) groundwater zones monitored, including the DD-zone groundwater (via MW-5DD), but noted that the vertical extent of contamination in DD-zone well 38DD required further evaluation.

Please note that the remedial action of shallow groundwater at the Site was approved by NJDEP as an IRM in its May 25, 2006 letter. The IRM proposal for deep groundwater at the Site was approved by NJDEP in its May 29, 2015 letter.

The characterization and delineation of soil contamination at the Site has been documented in prior Arsynco reports, including the June 1997 RIR, the June 2002 RIR Addendum, and the December 2003 RIR/RAW. These prior reports documented soil (including historic fill material) contamination and delineation in comparison to the May 1999 Soil Cleanup Criteria (SCC), which were the standards in place at the time the investigations were completed and the noted reports submitted to NJDEP. The Case Inventory Document (CID) summaries provided with the Arsynco reports dated February 2013 and November 2014 also summarized Site soil concerns in comparison to the May 1999 SCC.

In its August 2013 letter, NJDEP stated that Arsynco should evaluate all areas of concern (AOC) to the June 2008 Soil Remediation Standards (SRS), not the May 1999 SCC. In response to Arsynco's requests for further clarification on this requirement, NJDEP issued a letter dated September 3, 2013, which required Arsynco to perform an order of magnitude analysis (OMA) for the soil AOCs that were issued remedial approvals via the NJDEP's May 25, 2006 IRM approval letter. The OMA is a requirement specified at N.J.A.C. 7:26E-1.5c(2)iii., which states that the person responsible for conducting the remediation (PRCR) of a site must comply with the standards or criteria developed by the Department under N.J.S.A. 58:10B-12a for that site prior to June 2, 2008 (i.e., the May 1999 SCC), and that those standards or criteria cannot be more than an order of magnitude greater than the remediation standards otherwise applicable under N.J.A.C. 7:26D (the June 2008 SRS).

The NJDEP's September 3, 2013 letter also required that Arsynco evaluate soils located in areas outside of the AOCs approved for soil IRMs (per NJDEP letter of May 25, 2006), to the current June 2008 SRS. However, no additional soil AOCs have been identified at the Site since submittal of the December 2003 RAW and receipt of the NJDEP's May 25, 2006 letter.

Please note that the NJDEP's letter dated May 29, 2015 reiterated the requirement in its August 2013 letter that Arsynco evaluate all soil AOCs to the June 2008 SRS, not the May 1999 SCC. However, as noted above, NJDEP's September 3, 2013 letter clarified this issue and instead required Arsynco to conduct an OMA. The required OMA evaluation for soil is specified at N.J.A.C. 7:26E-1.5c(2)iii, and NJDEP has issued an Order of Magnitude Guidance document (Updated August 10, 2009, http://www.nj.gov/dep/srp/guidance/rs/ord_mag08102009.pdf).

This submittal provides the results of additional RI activities that completed the vertical delineation of deep groundwater contamination and also provides the results of the OMA for Site soils.

1.1 ADMINISTRATIVE HISTORY

Following the submittal of the ISRA Initial Notice applications (i.e., - GIS and SES) for the Site in early 1993, Arsynco commenced with a comprehensive Site Investigation and Remedial Investigation (SI/RI) sampling program for the entire Site. The results of the SI soil sampling program, as well as the results of various phases of subsequent RI sampling events, were provided to the NJDEP in the RIR dated June 1997.

In February 1999, Arsynco submitted a Remedial Action Selection Report (RASR) and a proposed RAW to NJDEP. On March 28, 2000, the Department issued a response and comment letter to the Arsynco RIR and RAW submittals. On May 11, 2000 Arsynco submitted additional information to NJDEP to address each of the comments provided by the Department in its March 2000 correspondence. Following review of the May 2000 letter from Arsynco, the NJDEP issued additional comments relative to the RIR and RAW for the Site in a letter dated May 1, 2001.

In June 2002, Arsynco submitted a RIR Addendum in response to the NJDEP's May 2001 correspondence. On November 7, 2002, the NJDEP issued a response and comment letter addressing all soil issues related to its review of the June 2002 RIR Addendum. A separate response letter dated February 4, 2003 was received from NJDEP which addressed all groundwater issues associated with the June 2002 RIR Addendum.

In December 2003, Arsynco submitted a RIR Addendum and a revised RAW for AOCs on the Site (JMC, 2003). The December 2003 report also contained specific responses to the comments outlined in the NJDEP's letters dated November 7, 2002 (soil issues) and February 4, 2003 (groundwater issues).

On May 25, 2006, NJDEP issued a letter in response to the December 2003 RAW submittal. The May 2006 letter from the NJDEP stated that the 2003 RAW could not be fully approved as a RAW because further delineation of groundwater was required. However, the NJDEP's May 2006 letter approved the 2003 RAW as an Interim Remedial Measure (IRM). The IRM included either acceptance or conditional acceptance of the remedial proposals for all soil AOCs (including the former building slabs and foundations that remained on the Site), and approval of the proposed air sparge and soil vapor extraction system (AS/SVE) for remediating VOC contamination in the shallow fill soils and groundwater. The IRM also included the conditional acceptance of natural attenuation as a remedial measure for VOCs in shallow groundwater following the active treatment phase via AS/SVE. Roughly 50-60% of the AS/SVE system (Sections 1 & 2) was installed in 2014, and these sections have been operating since December 2014. In November 2015 Arsynco submitted to NJDEP and Operation and Maintenance Plan for Air Sparging/Soil Vapor Extraction (AS/SVE) Treatment System. The November 2015 O&M Plan was developed after a period of operating the installed sections of the system (Sections 1 & 2). NJDEP reviewed the November 2015 O&M Plan and issued a comment letter dated February 26, 2016.

The only portion of the 2003 RAW proposal that was not accepted or conditionally accepted by the NJDEP in its May 2006 IRM approval letter was the natural attenuation proposal that was presented for VOC contamination in deep groundwater. The NJDEP stated that the May 2003 concentrations of total VOCs in wells MW-11D and MW-22D were too high at that time to support a natural attenuation remedy. Therefore, the NJDEP required Arsynco to submit a revised RAW that proposed active treatment for deep groundwater at the Site.

Following receipt of the NJDEP letter dated May 2006, Arsynco conducted substantial, additional groundwater investigation activities at the Site. A revised RAW for deep groundwater was prepared and submitted to NJDEP in February 2013. Based on a thorough evaluation of the results of the additional activities conducted, monitored natural attenuation (MNA) was again determined to be the most appropriate and the only practical remedial action for the VOCs in deep groundwater at the Arsynco Site. However, as stated in the NJDEP August 2013 response letter, the proposed MNA plan was again not accepted by the Department due to the VOC concentrations in deep wells MW-11D, MW-22D, and MW-38D being indicative of product based upon the NJDEP's 1% solubility rule.

In November 2014 Arsynco submitted an RIR Addendum (Groundwater) and Proposed IRM for Deep Groundwater to NJDEP. This report responded to NJDEP's August 2013 letter, provided results of additional groundwater sampling events that were completed at the Site subsequent to the submittal of the previous RAW in 2013, and presented Arsynco's revised proposal for the remediation of VOCs in deep groundwater. The IRM for deep groundwater included pump and treat operations in the areas of the main VOC contamination plume, with monitored natural attenuation (MNA) for lower levels of contamination outside the main source area. The IRM proposal for deep groundwater was accepted by NJDEP in its letter dated May 29, 2016.

1.2 REPORT ORGANIZATION

Section 2 of this RIR Addendum provides basic Site layout information. Section 3 provides a description of the physical setting of the Site, including summaries of Site and regional geologic and hydrogeologic conditions. Section 4 of this report provides Arsynco's responses to comments contained in NJDEP's letter dated February 26, 2016. Section 5 of this report provides a technical overview that presents a general profile of the additional groundwater RI activities, a summary of the results of the OMA evaluation for soils, and includes a brief summary of the overall nature of contamination identified at the Site. Section 6 discusses the updated receptor evaluation (RE) for the Site. Section 7 provides the findings and recommendations.

2.0 BACKGROUND INFORMATION

2.1 GENERAL SITE INFORMATION

The Arsynco facility, known as Block 91, Lot 1, consisted of several manufacturing/storage buildings situated on approximately 12.3 acres of industrial zoned land. Arsynco has owned and

operated the property since 1969. However, the property had been owned and operated by a number of chemical manufacturing companies dating back to the early 1900s.

Arsynco had been involved in the manufacture of specialty organic chemicals, pharmaceutical intermediates and pharmaceutical finished products (salts of phenylpropanolamine for inclusion in products such as Contact and Alka Seltzer Plus), propylene imine and derivatives, hair dyes (aromatic amines), silicone intermediates, a quarternary ammonium salt, propiophenone and isobutyrophenone. The chemical companies that occupied the Site immediately prior to Arsynco had conducted operations similar in nature to Arsynco.

The Arsynco property is divided into two (2) tracts. The eastern portion of the property is known as Block 91, Lot 1, Tract 2. This section consists of approximately 2.8 acres of saline marsh and contains manmade drainage ditches. The ditches on Tract 2 are tidally influenced and accept a significant amount of drainage and discharges from the surrounding industrial facilities. Due to the nature of this area of the Site, Tract 2 has never been developed and remains vacant land.

The main portion of the Arsynco property is known as Block 91, Lot 1, Tract 1 and consists of approximately 9.5 acres of land. This section of the property contained all production operations and, at the time Arsynco's operations ceased, accommodated 17 buildings of various sizes. Manufacturing operations historically conducted on the Site were limited entirely to Tract 1. There are currently no structures remaining on the Site.

3.0 PHYSICAL SETTING

As part of the previous Site investigation activities, Arsynco conducted an extensive review and investigation of geologic and hydrogeologic conditions of the Site and the region. The most recent geologic and hydrogeologic conceptual site models (CSM) were provided in the February 2013 RAW (JMC, 2013) and are reproduced and provided as Appendices A and B in this report.

3.1 SITE DESCRIPTION

The Arsynco facility is located in a heavy industrial and commercial area at the western boundary of the Hackensack Meadowlands tidal marsh area in Carlstadt, Bergen County, New Jersey. The property is bounded to the north by Northern Eagle Beverage Company, an Anheuser Busch warehouse/distribution facility. Cosan Chemical Company and RML Construction (occupant of the former Aluminum Anodizing Corp. facility) are located adjacent to the southern property boundary. The west side of the property is bounded by New Jersey Transit railroad tracks and commercial and industrial facilities; Route 17 is located immediately beyond the properties that border the west side of the Site. Industrial and commercial facilities are also located immediately east of the Site, on the opposite side of 16th Street. The nearest residential area is located approximately ¼ of a mile to the west and upgradient of the Arsynco Site, on the opposite side of Route 17. A copy of the USGS topographic map, depicting the location of the Site, is provided as Figure 1.

As indicated previously, the east side of the Arsynco property consists of low lying, undeveloped, saline marsh land with small, manmade drainage ditches. This eastern portion of the Site, known as Tract 2, was never developed or used for manufacturing operations, although the shallow soils in this area were re-worked extensively in the past to accommodate regional drainage patterns and the construction of 16th Street. The drainage ditches on Tract 2 of the Arsynco property are under tidal influence and have historically been used to accept surficial runoff from the entire industrial region surrounding the property, as well as direct discharges from surrounding industrial facilities. The Arsynco property, as well as virtually all of the land to the north, south, and east of the Site was once similar marsh land, typical of the undeveloped portions of the Meadowlands region. However, nearly all of the surrounding land has been filled in over the years and developed. The material historically used to fill the meadowlands in this area is of overall very poor quality. The continual filling of the marshland that previously encompassed the entire region has resulted in more regional drainage being directed onto Tract 2 of the Arsynco Site, which is now one of the lowest lying areas in the region. Site investigations have confirmed the presence of up to approximately 6 feet of fill material above the native meadow mat layer on Tract 1 of the Site.

3.2 SITE SPECIFIC SURFACE DRAINAGE/TOPOGRAPHY

The Site is located in the western part of the reclaimed portion of the grassy marsh area of the Hackensack River flood plain. The base topographic elevation of the Site is approximately 4.5 to 5.0 feet above mean sea level (msl). Runoff from the former production area of the property (Tract 1) was historically directed toward the municipal sanitary sewer via the former on-Site effluent treatment basin (ETB), located adjacent to former Building 5 in the center portion of the Site. The former surface drains/troughs on-Site discharged into the ETB. The effluent basin was removed during the site investigation activities conducted in the 1990s. Available information indicates that industrial and sanitary discharges from the facility have been directed to the municipal sanitary sewer system since approximately 1909, when the local sanitary lines were installed on 13th Street.

Natural drainage from the Site is mainly to the east and southeast, towards the man-made ditches on Tract 2. Periodic flood water is drained from the Site by a series of interconnecting, man-made ditches that run along the south and east sides of the property. These ditches are located both on and off Arsynco property and drain the entire surrounding area, including adjacent industrial facilities. The Site and regional topographic and drainage patterns have been significantly modified over the years by expanding construction, development and general filling activities. In fact, most of the former marshland around the Arsynco property has been filled in and developed during the last 30 years, and a significant amount of filling and land development is still occurring in this area. These activities have resulted in the elimination of most of the former marshland that previously accepted drainage from the entire industrialized area. As a result, Tract 2 of the Arsynco Site is now one of the lowest lying properties in the area. Tract 2, which has provided a drainage pathway for the entire area, now accepts a significantly increased amount of runoff and drainage from the surrounding, developed properties.

A review of current and historic topographic maps (Cook, et al. 1884; Smock and Vermeule 1896; Wilson 1901; USGS 1995) indicates that no significant change in topography has occurred

in the last 130 years. Cook, et al. (1884 topographic map) indicates that nearly all of the marshland had already been filled in the area of the Arsynco Site by 1884, and streets were shown at this time to be laid out in the overall grid pattern that currently exists in the Site area. The major thoroughfare currently known as Paterson Plank Road (Route 120) was already present running across the width of the Hackensack River valley in 1884. The railway that currently runs along the western Site boundary was also present at this time. Broad and Division Streets extended east of the railroad to the current position of 20th Street. Neither Smock and Vermeule (1896) nor Wilson (1901) shows any of the north-south trending numbered streets east of the railroad lines. However, the 1901 topographic map (Wilson) does show Broad and Division Streets extending east of the rail line by 1901. It is possible that Cook, et al. (1884) indicate *planned* development of Carlstadt extending eastward into the marsh rather than actual, existing development at that time. A copy of the current USGS topographic map of the region of the Arsynco Site is provided as Figure 1.

The overall history of Site development and operations is consistent with the analysis of historical topographic maps of the region, as described above.

3.3 REGIONAL AND SITE-SPECIFIC SOILS

According to the USDA Soil Conservation Service, the soil on the Site has been mapped as Urban Land. Areas mapped as Urban Land have been filled and have generally been covered with an impervious surface or buildings over 85 percent of the area. Immediately northeast of the Site the soils are mapped as Udorthents wet substratum. Typically, this soil type consists of materials which have been smoothed or extensively disturbed to a depth of 3-feet or more. The shallow material generally consists of a mixture of various fill soil materials with variable amounts of stones, boulders and rubble, and are somewhat poorly to very poorly drained. This soil type is generally subject to flooding or prolonged ponding.

Extensive, site-specific soil information was obtained during the previous SI/RI programs at the Site. The results of the investigations have confirmed that the soils beneath the Site consist of poor quality, historic fill material to an average depth of approximately 4.5 feet below surface grade. The fill materials encountered across the majority of Tract 1 consisted mainly of fine to medium grained sands with debris such as brick, metal, ash, wood and concrete fragments. However, the fill in the south-southeast portion of Tract 1 was found to be much different. Although much of the same historic fill material described above (ash, concrete fragments, etc.) was found in the southeast part of the Site during the SI/RI activities, this area was also found to contain process and industrial waste materials that were not encountered in other areas of the property. PCBs are the primary concern associated with fill in the south-southeast portion of Tract 1.

A meadow mat layer underlies the fill material and extends to depths up to approximately 9-10 feet below grade. A layer of gray, silty, clayey, sand and dense, gray clay were encountered from approximately 9 feet to 21 feet below grade in each of the deeper borings installed. The following subsections provide detailed, updated summaries of site-specific and regional geologic and hydrogeologic conditions.

3.4 GEOLOGY

The CSM for the geology of the Arsynco Site was developed in detail and presented in the February 2013 RAW (JMC, 2013). The CSM for Site geology is reproduced and included as Appendix A.

3.5 HYDROGEOLOGY

The conceptual model for the hydrogeology of the Arsynco Site was developed in detail in (JMC, 2013). The CSM for the hydrogeology of the Site, including detailed descriptions of Site hydrostratigraphy, as well as both regional and Site-specific groundwater flow, is reproduced and included as Appendix B.

4.0 RESPONSE TO COMMENTS IN FEBRUARY 2016 NJDEP LETTER

The following section provides a response to the comments contained in the NJDEP's February 26, 2016 letter.

NJDEP Comment #1.

In its next report on shallow ground water, Arsynco should briefly explain the differences between the originally proposed AS/SVE layout (Figure 28 of the December 2003 report) and the AS/SVE layout of that Arsynco is presently working on (Figure 1 of the Operations and Monitoring Plan). Does the AS/SVE pile contain soil from the area of soil sample PP-12 on the west end of Building 1 and soil from the former drum cleaning station near the northeast corner of Building 1? Has the AS/SVE area been extended to include the area of the VI-PD5 soil samples and MW-34 and the area of soil sample PP-3 and MW-33S? Why has the AS/SVE area been extended into the eastern end of Area V?

Arsynco Response:

The main differences between the AS/SVE layout shown on Figure 28 of the December 2003 RAW and Figure 1 of the O&M Plan include:

1. The numbering designations of the AS/SVE areas were changed. What was shown as "Area 3" and "Area 4" on Figure 28 of the 2003 RAW were reassigned as Section 1 and Section 2, and these are the areas of the AS/SVE system that have already been installed. The areas labeled as "Area 1" and "Area 2" on Figure 28 of the 2003 RAW have not yet been installed. These areas will be installed as Section 3 and Section 4 following completion of the PCB remediation activities.
2. Two (2) additional AS/SVE treatment areas were added to the figure contained in the O&M Plan. These added "lobes" extend from the eastern part of the originally proposed AS/SVE area. The lobe extending to the south (along west side of former pond) was added to encompass the areas of MW-33S, MW-34S, and the VI-PD5 and

PP-3 soil sample locations. This area was added to the AS/SVE treatment area based on the results of groundwater data from MW-33S and MW-34S, as proposed in the 2003 RAW and noted in the NJDEP response letter dated May 25, 2006. The lobe that extends to the east (north side of former pond and into east end of Area V) was added to include the area of soil samples ARSD-17, V-3, and PP-5. Both of these "lobes" were added to the extent of the proposed AS/SVE treatment area based on a reevaluation of the VOC soil data and the additional investigations conducted subsequent to the 2003 RAW and the May 25, 2006 letter from NJDEP. However, the actual extent of the AS/SVE in both of these added lobe areas will be determined following the completion of the PCB remedial excavation activities, as the soils in some of these area will be excavated and disposed as part of the PCB remedy. Arsynco will provide NJDEP with a revised figure showing the proposed extent of the additional AS/SVE treatment area following completion of the PCB remediation activities.

The AS/SVE pile constructed on the Site consists of soils from the area of soil sample PP-12 on the west end of Building 1 and soil from the former drum cleaning station near the northeast corner of Building 1.

NJDEP Comment #2:

Arsynco has reported that only 50% to 60% of the AS/SVE system has been installed because of site space and logistics concerns. Arsynco should put completion of the AS/SVE system on its remedial action schedule.

Arsynco Response:

The installation of the remaining areas of the AS/SVE treatment area (Sections 3 & 4) are contained in the project schedule (Version 4.0) that was submitted to NJDEP via email on January 20, 2016. This schedule notes that the work is scheduled to be completed in the 3rd quarter of 2017, following completion of the PCB remediation activities and the installation of the deep groundwater IRM components.

NJDEP Comment #3:

In its next report that addresses shallow ground water, Arsynco should submit a comprehensive monitoring plan that addresses all shallow ground water remediation concerns. The plan should include, but not be limited to, the AS/SVE performance monitoring presented in the Operations and Monitoring plan.

Arsynco Response:

This report does not specifically address shallow groundwater. Please note that many of the shallow monitoring wells on the Site were recently sealed/abandoned in preparation for implementing the extensive soil excavation work associated with the PCB remediation, which will begin in April 2016. Some of the shallow monitoring wells will have to be reinstalled

following completion of the PCB remediation work. Arsynco believes that a comprehensive monitoring plan for shallow groundwater concerns should be prepared and submitted following installation of Sections 3 and 4 of the AS/SVE system and reinstallation and sampling of shallow wells on the Site after completion of the PCB soil excavation work. Arsynco can prepare and submit a revised schedule that includes these activities.

NJDEP Comment #4:

Arsynco provided a post-AS/SVE soil sampling proposal on pages 141 and 142 of the December 2003 report. Arsynco should review this proposal, update it if necessary, place the soil sampling event on its remedial action schedule, and provide a current soil sampling proposal with the document addressed below.

Arsynco Response:

Arsynco has reviewed the post-AS/SVE confirmatory soil sampling proposal presented in the December 2003 RAW. Since no additional soil sampling for VOCs has been conducted within the area of the proposed AS/SVE treatment system subsequent to the 2003 RAW submittal, no new areas of impacted soils have been identified in these areas of the Site. As a result, the post-AS/SVE confirmatory sampling proposal presented in the 2003 RAW report is still valid and proposed. The only addition/clarification Arsynco believes is necessary to the confirmatory soil sampling proposal is that the samples collected (proposed frequency of 1 sample per 2,000 square feet) are proposed to be biased toward locations where previous soil and groundwater samples showed the highest concentrations of VOCs.

The shallow soil confirmatory sampling that is proposed following treatment via the AS/SVE system is already contained in the project schedule (Version 4.0) that was submitted to NJDEP via email on January 20, 2016. This schedule notes that these activities are currently scheduled to be completed in the 4th quarter of 2024, following projected completion of the AS/SVE treatment.

NJDEP Comment #5:

Arsynco and the Department can discuss the appropriate point for transitioning from AS/SVE to monitored natural attenuation or to another remedial technique as the ground water remediation progresses.

Arsynco Response:

No response required.

5.0 TECHNICAL OVERVIEW

An extensive amount of SI and RI sampling activities were previously completed at the Site, and these activities documented the nature and extent of contaminants present in Site soils and groundwater. The results of the previous sampling programs were provided to the NJDEP in the following report submittals:

- June 1997 RIR,
- February 1999 RAW,
- June 2002 RIR Addendum,
- December 2003 RIR Addendum and RAW (JMC, 2003),
- February 2013 RIR Addendum (Groundwater) and RAW for Deep Groundwater,
- November 2014 RIR Addendum (Groundwater) and Proposed IRM for Deep Groundwater,
- July 2015 Engineering & Monitoring Plan (for Risk-Based PCB Disposal Approval).

Overall, the previous SI/RI programs verified that the primary issues at the Site are associated with the area of the property encompassing the production buildings and extending east, toward Tract 2. Although elevated levels of some contaminants were detected in the soils in the non-production areas (Area I) and the west side of the property (Area II), the levels identified in these areas are not as significant as the contaminant concentrations detected on the eastern half of Tract 1. Levels of contaminants related to poor quality historic fill material have also been identified across the majority of the Site (e.g., - PAHs, metals).

VOCs (mainly xylenes and toluene) are present in the top 4-5 feet of surficial fill soil in the area encompassing former Buildings 19, 8, and 6, the former areas of the main tank farm and old tank farm (south of former Building 6), and areas adjacent to former Building 1. The VOCs in shallow soils and groundwater throughout these areas will be remediated via the AS/SVE system.

Significant concentrations of contaminants were also identified in the sediments at the base of the former pond (Area VI) that was located on the east side of Tract 1. However, due to the presence of a dense clay liner in the former pond, the contaminants present in the filled, former pond basin have been, and continue to be, effectively contained in this area.

In addition to the elevated levels of VOCs, concentrations of PCBs were identified in the fill material throughout the majority of the Site. The most significant levels of PCBs were detected in the southeast portion of the Site (Area VIII); the material used to fill this area of the Site prior to 1969 was determined to contain process-type waste materials. The remediation of PCBs at the Site will be conducted in accordance with the Risk-Based Cleanup Approval received from USEPA and approved by NJDEP.

Elevated levels of various metals were also detected at sporadic locations throughout the Site, and many of these concentrations are believed to be related to the historic fill material on the property. However, the most significant area of metals contamination was identified in a fairly

isolated area located to the east of former Buildings 17 and 18, along the Tract 1 and Tract 2 border, in and adjacent to the area where process-type waste materials were discovered, as noted above.

PAHs have been identified at slightly elevated concentrations within the fill material in many areas of the Site, and the presence of these compounds is primarily believed to be related to the historic fill material that covers the majority of the Site.

The concentrations of VOCs are the primary concern associated with deep groundwater at the Site, and the most significant area of groundwater contamination is located in the area of former Building 8. Elevated concentrations of VOCs (including chlorinated compounds) were also detected in the groundwater entering the Arsynco property from off-Site from the west, northwest, and southwest. Deep groundwater at the Site will be remediated in accordance with the November 2014 IRM Proposal, as accepted by NJDEP via letter dated May 29, 2015.

The soil contamination at the Site, as well as the VOC contamination present in shallow, fill soils and shallow groundwater, has been delineated and will be remediated in accordance with the 2003 RAW (JMC, 2003) and the NJDEP's IRM approval letter dated May 25, 2006. PCBs will be remediated in accordance with the TSCA Risk-based Disposal Approval issued by EPA on February 12, 2009.

As noted previously, NJDEP issued a letter dated September 3, 2013, which required Arsynco to perform an order of magnitude analysis (OMA) for the soil AOCs that were issued remedial approvals via the NJDEP's May 25, 2006 IRM approval letter. The OMA is a requirement specified at N.J.A.C. 7:26E-1.5c(2)iii., which states that the person responsible for conducting the remediation (PRCR) of a site must comply with the standards or criteria developed by the Department under N.J.S.A. 58:10B-12a for that site prior to June 2, 2008 (i.e., the May 1999 SCC), and that those standards or criteria cannot be more than an order of magnitude greater than the remediation standards otherwise applicable under N.J.A.C. 7:26D (the June 2008 SRS). The required OMA for each AOC is provided in Section 7.1 of this report. The results of the OMA indicated that:

- Two (2) soil samples in Area III contained chloroform at concentrations above the 2008 SRS, but the soils at both of these locations are already being remediated via the AS/SVE system;
- One soil sample from Area V contained 1,1,2,2-Tetrachloroethane at a level above the 2008 SRS, but the soils at this location will be excavated and disposed off Site as part of the upcoming PCB remediation program;
- One soil sample from Area VI contained 1,4-dichlorobenzene at a level above the 2008 SRS, but the soils at this location will be excavated and disposed off Site as part of the upcoming PCB remediation program;
- Five (5) soil samples from Area VII contained either chloroform or naphthalene at concentrations above the 2008 SRS, but the soils at these five (5) samples locations are already being remediated via the AS/SVE system; and,

- Three (3) soil samples from Area VIII contained naphthalene above the 2008 SRS, but the soils at these three (3) locations will be excavated and disposed off Site as part of the upcoming PCB remediation program.

The NJDEP's September 3, 2013 letter also required that Arsynco evaluate soils located in areas outside of the AOCs approved for soil IRMs (per NJDEP letter of May 25, 2006), to the current June 2008 SRS. However, no additional soil AOCs have been identified at the Site since submittal of the December 2003 RAW and receipt of the NJDEP's May 25, 2006 letter.

The relevant support data associated with the additional Site activities completed subsequent to the submittal of the November 2014 Deep Groundwater IRM proposal report are included in the appropriate appendices to this report. The additional samples were collected in accordance with the procedures outlined in the NJDEP's Field Sampling Procedures Manual (May 2005) and the Technical Requirements for Site Remediation (N.J.A.C. 7:26E). The samples were analyzed by NJDEP-certified analytical laboratories. Samples were submitted to the laboratory and analyzed within appropriate holding times. Laboratory method detection limits were within acceptable ranges, below the applicable remediation standards. No nonconformities were noted, and the laboratory data is considered reliable. No significant events occurred during sampling, and no unusual seasonal variations were observed that influenced sampling procedures or analytical results.

Through the investigations conducted, sufficient information has been obtained to know the nature and extent (both on and off Site) of discharges of contaminants associated with the Arsynco Site. There is also sufficient information to know which, if any, receptors have been or may be impacted by the Site-related discharges being remediated. Remedial actions are required, and additional delineation is not necessary in order to select appropriate remedial actions to protect public health and the environment. Based on the above, the remedial investigation is considered complete from a performance-based perspective.

6.0 RECEPTOR EVALUATION

An Initial Receptor Evaluation (RE) form was submitted to the Department in February 2012, and updated REs were submitted with the February 2013 and November 2014 reports. An updated RE form is also being submitted concurrently with this report.

The Arsynco Site is located in a complex geologic area along the boundary between the glacial Lake Bayonne deltaic deposit, the glacial Lake Bayonne and Lake Hackensack lake bottom deposits and the salt marsh deposits. The nearest surface water bodies are the tidal ditches located within Tract 2 on the eastern side of the Site and the tidal ditch that runs along the southern property boundary. These ditches receive discharges from the surrounding commercial and industrial properties (including open pipe discharges from neighboring facilities), as well as surface drainage from the entire surrounding area. The quality of water and sediments in these ditches is poor and is part of a regional problem. Sediment sampling conducted on Tract 2 has identified elevated levels of metals and PCBs. In addition, one area adjacent to the Tract 1 border also contains elevated levels of VOCs, and a plan for active remediation in this bordering

area was approved by NJDEP in its May 2006 letter. Surface water sampling within the ditches on the Site indicate the presence of slightly elevated levels of arsenic, lead and mercury. However, these contaminants are directly related to the quality of surface waters entering the Site during high tide events each day.

The Baseline Ecological Evaluation (BEE) conducted at the Site, and provided to NJDEP in July 2003, looked at the potential for contaminants in soil to reach a receptor, and the results of the BEE suggested a potential for impacts to terrestrial ecological receptors from exposure to certain VOCs, SVOCs, PCBs, and metals in Tract 1 soils. However, it was determined during the BEE that once the proposed remedial measures for Tract 1 were implemented, the migration pathway that exists for these soils would be eliminated. Arsynco is currently preparing updated ecological evaluation information, which will be provided to NJDEP in the next report submittal.

The receptor evaluation process has been ongoing at the Site and has addressed land use, groundwater, vapor intrusion and ecological concerns. No land use, groundwater or vapor intrusion receptor concerns have been documented in connection with the Site.

A thorough well search was provided in JMC (2003), and updated well searches were provided in the Initial RE submittal made in February 2012 and in the updated RE submission made in November 2014. The well search information indicates that seven (7) domestic wells are located within 1 mile of the Site. However, none of these wells are within ½ mile of the property, and none are located downgradient of the Site. Two (2) of these domestic wells are reported at locations more than 0.7 miles (3,700 feet) to the north, two (2) are located more than 0.75 miles (4,000 feet) to the south, two (2) are located more than 0.8 miles (4,200 feet) to the west, and one is located 3,700 feet to the northwest of the Site.

The well search information also indicates that five (5) Public Community and/or Public Non-community wells are located within 1 mile of the Site. However, none of these wells are located downgradient of the Site. Two (2) of these wells are located to the north of the Site (one is approximately 2,000 feet north and one is 1 mile north). Two (2) of these wells are located between 0.5 and 0.8 miles to the west or west-northwest of the Site. The remaining well is located slightly more than 1 mile south of the property.

Fifty-two wells classified as either Industrial or Irrigation were found within 1-mile of the Site. Several hundred additional wells classified as Monitoring, Piezometer, Recovery, Gas Vent, Boring, Test, etc. were also located as part of the well search. Overall, the well search indicated that no potable, downgradient receptors were identified.

Neither shallow nor deep groundwater within the contaminated area beneath the Site is currently used for any purpose, and no future use of groundwater in the impacted areas is planned. Based on the i-MapNJ Geology web site, the Arsynco Site is not located in a Well Head Protection Area (Community) and is also beyond the extent of the Tier 3 (12 year) zone of Well Head Protection Areas (Non-Community). Additionally, the property is not located in a Groundwater Recharge Area (i.e. - recharge listed as zero inches per year). This is likely due to the fact that the Site is located in a groundwater discharge area.

As noted above, an updated RE form is being submitted to NJDEP concurrently with this report.

7.0 FINDINGS / RECOMMENDATION

7.1 SOILS - ORDER OF MAGNITUDE ANALYSIS

Arsynco completed the required OMA evaluation for soil in accordance with N.J.A.C. 7:26E-1.5c(2)iii and NJDEP's September 3, 2013 letter. The OMA was conducted following the procedures summarized in NJDEP's Order of Magnitude Guidance document (Updated August 10, 2009) available at http://www.nj.gov/dep/srp/guidance/rs/ord_mag08102009.pdf.

OMA evaluations for soil remediation standards are only applicable for the direct contact (ingestion/dermal and inhalation) exposure pathway. In accordance with NJDEP guidance, a comparison of the June 2008 SRS to the May 1999 SCC indicates that the following contaminants have direct contact SRSs that are an order of magnitude or more lower in concentration than the May 1999 SCC concentration.

<u>Non-residential</u>	<u>Residential</u>
Bis(2-chloroisopropyl)ether	Bis(2-chloroisopropyl)ether
Boromodichloromethane	Boromodichloromethane
Bromomethane	Chloroform
Chloroform	Chloromethane
Chloromethane	Dibromochloromethane
Dibromochloromethane	1,4-Dichlorobenzene
1,4-Dichlorobenzene	1,1-Dichloroethane
1,1-Dichloroethane	4-Methylphenol
Hexachlorocyclopentadiene	Naphthalene
4-Methylphenol	1,1,2,2-Tetrachloroethane
Naphthalene	1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane	
1,1,2-Trichloroethane	

Source: NJDEP Order of Magnitude Guidance (Updated August 10, 2009)

Therefore, the OMA for soil was conducted by reviewing the results of the soil samples from each AOC on the Site (only the direct contact exposure pathway results for the above-listed contaminants) to determine if the applicable/listed compounds were detected in Site soil samples at concentrations above the June 2008 SRS. The results of the OMA are provided for each AOC in the following subsections.

7.1.1 AREA I – Parking Lot, Office Buildings and Pond

JMC reviewed the results of the soil samples collected from Area I to determine if the applicable/listed compounds (where the June 2008 SRS are an order of magnitude or more lower than the May 1999 SCC) were detected at concentrations above the June 2008 SRS. No exceedances were found.

7.1.2 AREA II – Northwest Portion of Site

JMC compared the results of the soil samples collected from Area II to determine if the applicable/listed compounds were detected at concentrations above the June 2008 SRS. No exceedances were found.

7.1.3 AREA III – Northeast Portion of Site

JMC compared the results of the soil samples collected from Area III to determine if the applicable/listed compounds were detected at concentrations above the June 2008 SRS. Please refer to Table 1.

Soil samples III-8 (1.5'-2.0') and III-12 (2.5'-3.0'), both collected on 8/11/94, contained chloroform at concentrations of 2 ppm and 3.7 ppm, respectively. These levels are below the most stringent May 1999 Direct Contact SCC of 19 ppm, but the most stringent 2008 Direct Contact SRS (0.6 ppm) is more than an order of magnitude lower than the May 1999 SCC. However, the soils at the locations of both soil samples III-8 and III-12 were excavated and are currently part of the "sparge pile" area that is being remediated by the AS/SVE system.

7.1.4 AREA IV - Plant Production Area

JMC compared the results of the soil samples collected from Area IV to determine if the applicable/listed compounds were detected at concentrations above the June 2008 SRS. No exceedances were found.

7.1.5 AREA V – Building 19 and Northeast Tank Farm

JMC compared the results of the soil samples collected from Area V to determine if the applicable/listed compounds were detected at concentrations above the June 2008 SRS. Please refer to Table 1.

Soil sample DJS-007, which was collected by the NJDEP in 1991, contained 1,1,2,2-Tetrachloroethane at a concentration of 370 ppm. This level was above the May 1999 Direct Contact SCC of 34 ppm, which is also more than an order of magnitude greater than the most stringent 2008 Direct Contact SRS of 1 ppm. However, the soils at the location of soil sample DJS-007 are located within PCB grid GG-31, where the top 2 feet of soils will be excavated and properly disposed off-Site as part of the PCB remediation because they contain PCB concentrations above 500 ppm. Although the depth of NJDEP soil sample DJS-007 was not

reported, it is very likely that it was collected within the top 2 feet, since groundwater is less than 1.5 feet in this area.

7.1.6 AREA VI – Former Pond Area

JMC compared the results of the soil samples collected from Area VI to determine if the applicable/listed compounds were detected at concentrations above the June 2008 SRS. Please refer to Table 1.

Soil sample VI-16 (0.0-0.5'), collected on 6/6/95, contained 1,4-Dichlorobenzene at a concentration of 13 ppm. This level is below the May 1999 Direct Contact SCC of 100 ppm, but the May 1999 SCC is more than an order of magnitude greater than the most stringent Direct Contact 2008 SRS of 5 ppm. However, the soils at the location of soil sample VI-16 are located in within PCB grid AA-41, where soils to approximately 3 feet contain PCBs at levels >500 ppm that will be excavated and properly disposed off-Site as part of the PCB remediation.

7.1.7 AREA VII – Primary Tank Farm Area

JMC compared the results of the soil samples collected from Area VII to determine if the applicable/listed compounds were detected at concentrations above the June 2008 SRS. Please refer to Table 1.

Soil samples VII-5 (0.75'-1.25' collected on 5/6/94) and VII-14 (1.0'-1.5' collected on 5/9/94) both contained chloroform at a concentration of 50 ppm. This level is above the most stringent May 1999 Direct Contact SCC of 19 ppm. The most stringent 2008 Direct Contact SRS (0.6 ppm) is also more than an order of magnitude lower than the May 1999 SCC. However, the soils at the locations of samples VII-5 and VII-14 are currently part of the AS/SVE field area that is installed, and the VOCs in these location are being remediated by the AS/SVE system.

Soil samples VII-8 (collected 10/27/94 from 1.0'-1.5'), VII-8A (collected 11/29/01 from 0.5'-1.0') and VII-8B (collected 11/29/01 from 3.5'-4.0') each contained levels of naphthalene. Soil sample VII-8 contained naphthalene at a concentration of 48 ppm. Soil sample VII-8A contained naphthalene at a concentration of 12 ppm, and soil sample VII-8B contained naphthalene at a concentration of 9.2 ppm. Although these levels are below the May 1999 SCC, the May 1999 SCC for naphthalene (100 ppm) is greater than an order of magnitude higher than the most stringent 2008 Direct Contact SRS (6 ppm). However, the soils at these samples locations are currently part of the AS/SVE field area that is installed, and the naphthalene at this location is being remediated by the AS/SVE system.

7.1.8 AREA VIII – Southern Portion of Site

JMC compared the results of the soil samples collected from Area VIII to determine if the applicable/listed compounds were detected at concentrations above the June 2008 SRS. Please refer to Table 1.

Soil samples VIII-20 (3.5'-4.0'), VIII-21 (3.5'-4.0'), and VIII-22 (3.0'-3.5'), each collected on 11/30/2001, contained naphthalene at concentrations of 36 ppm, 1,300 ppm and 250 ppm, respectively. The May 1999 SCC for naphthalene (100 ppm) is greater than an order of magnitude higher than the most stringent 2008 Direct Contact SRS (6 ppm). However, the soils at each of these samples locations are located within grids and at depths where PCBs were found at levels above 500 ppm, and the soils are each of these three (3) sample locations will be properly disposed off-Site as part of the PCB remediation program.

7.1.9 AREA IX - PCB and Site Fill Material Investigation

JMC compared the results of the soil samples collected from Area IX, which were analyzed only for PCBs, to determine if the applicable/listed compounds were detected at concentrations above the June 2008 SRS. No exceedances were found.

7.1.10 AREA X - Tract 2 (Eastern Side of Site)

JMC compared the results of the soil samples collected from Area X to determine if the applicable/listed compounds were detected at concentrations above the June 2008 SRS. No exceedances were found.

7.2 REVIEW OF PREVIOUSLY PROPOSED & APPROVED REMEDIES

In its letter dated August 2013, NJDEP required that Arsynco re-evaluate the previously approved remedial interim measures and the protectiveness of the previously approved engineering or institutional controls on the AOCs. From that re-evaluation, NJDEP requested that Arsynco then determine whether additional remediation may be required to ensure the remedy at each AOC remains protective of public health, safety and the environment and to make recommendations for each AOC that either i. "Additional remediation is necessary", or ii. "Additional remediation is not necessary." This re-evaluation for each AOC is provided in the following subsections.

The following remedies were previously proposed and/or approved for the Site by NJDEP via letter dated May 25, 2006.

7.2.1 Remediation of PCBs at and above 50 ppm

The remediation plan that was approved by both EPA and NJDEP for PCBs at and above 50 ppm in Site soils includes the activities listed below.

- The excavation and off-Site disposal of the soil and fill material that contains PCBs at concentrations at and above 500 ppm, with the exception of the area of the Former Pond on the east side of Tract 1.
- The excavation and consolidation of Site soils with PCB levels between 50 ppm and 499 ppm into a designated area on the east side of Tract 1, referred to as the "Consolidated

Material TSCA Disposal Area". The "Consolidated Material TSCA Disposal Area" will be located on top of (and cover) the entirety of the "Former On-site Pond TSCA Disposal Area" (see discussion of Former Pond, below).

- Once the PCB contaminated soils are placed into the "Consolidated Material TSCA Disposal Area", earthen and rip-rap flood protection berms will be installed around the perimeter of the area, and the area will be capped in accordance with TSCA regulations and the requirements of the February 2009 EPA Approval for the Site (6 inch layer of crushed aggregate base course, "CABC", topped with 6 inches of asphalt). Due to the quantity of soil that will be placed into this area, the average elevation of the TSCA PCB Disposal Area containment cap surface will be at least 10 feet above mean sea level, which will be approximately 5 to 6 feet higher than the surrounding and current ground surface elevation and approximately 2 feet higher than the 100 year flood elevation.
- The TSCA regulated area will also be secured with appropriate fencing and marked with signs in accordance with 40 CFR §761.40 and the M_L marking specified in 40 CFR §761.45(a).
- Once completed, this capped and bermed PCB TSCA Disposal Area will be included in a Deed Notice.
- Monitoring well clusters will also be installed upgradient and downgradient of this area, and perpetual monitoring and maintenance activities will be conducted.
- Due to the controls and restrictions, this area will be unsuitable for invasive future use (e.g., building, drainage retention, etc.).

7.2.2 Historic Fill Material

Contamination associated with historic fill material will be addressed by establishing appropriate institutional and engineering controls for the entire Tract 1 parcel. The institutional and/or engineering controls will also address other residual contamination remaining on Tract 1 following completion of the active remedies. The engineering control will consist of a clean soil and vegetation cover cap across Tract 1, with the exception of the TSCA regulated area discussed above. A 6 foot chain link fence will be placed/maintained around the perimeter of the Tract 1 parcel.

7.2.3 Tract 1 Fill/Soils with PCB Levels <50 ppm

The fill material that contains levels of PCBs <50 ppm across the majority of Tract 1 will be remediated by establishing appropriate institutional and engineering controls. The engineering control for the PCBs <50 ppm will consist of a clean soil and vegetation cover cap across Tract 1, with the exception of the TSCA regulated area discussed above. A 6 foot chain link fence will also be placed/maintained around the perimeter of the Tract 1 parcel.

7.2.4 Contamination in Area of Process-Type Fill Materials in Southeast Part of Tract 1

Elevated levels of BNs, metals, VOCs, phenols and TPHC were identified within the area where process-type waste materials were identified in the southeast part of Tract 1. The area of this process-type waste material also contains PCBs >500 ppm, and the vast majority of material in this area will be excavated and properly disposed off-Site as part of the PCB remedial proposal approved by both EPA and NJDEP. Additionally, material with PCB levels between 50 ppm and 499 ppm will be consolidated into the "Consolidated Material TSCA Disposal Area" and capped in accordance with the EPA TSCA approval. Following removal of this material, post-excavation, confirmatory soil sampling will be conducted. Once PCB impacted soils in these areas have been remediated to below 50 ppm (or below 500 ppm if area is within TSCA regulated cap area), the excavation will be complete. Residual contamination that remains above RDCSCC will be included as part of the institutional and engineering controls. Areas with PCBs remaining at levels less than 50 ppm will be capped via the general Site wide cap for Tract 1.

7.2.5 VOC Contamination in Shallow Soil/Fill Material and Shallow Groundwater on Tract 1

Elevated levels of VOCs (primarily BTEX) in shallow soil/fill material are located within a large area in the central portion of Tract 1 and in a couple of isolated areas on Tract 1 (soil sample PP-12 to west of former Building 1 and area of the former drum cleaning station near northeast corner of former Building 1). The remediation of the VOCs in shallow soil/fill and shallow groundwater in these areas will be remediated via an AS/SVE system. Once the main VOC source areas are treated via the AS/SVE system, and VOC levels in shallow soil and shallow groundwater have been reduced by establishing a decreasing trend, the remedy will transition to a monitored natural attenuation (MNA) program.

As stated in Section 1.1, approximately 50-60% (Sections 1 & 2) of the AS/SVE system has already been installed and has been operating (periodically) since December 2014. In November 2015 Arsynco submitted an Operation and Maintenance Plan to NJDEP for the installed sections of the AS/SVE system. The O&M plan discussed the methods for operating and assessing the effectiveness of Sections 1 & 2 of the AS/SVE system and for determining when to transition from the active AS/SVE system to the natural attenuation remedy. NJDEP reviewed the November 2015 O&M Plan and issued a comment letter dated February 26, 2016 (refer to Section 4).

7.2.6 Contaminated Material Within Former Pond

The former pond is located on the eastern part of Tract 1 and was formerly used to accept drainage and discharges from the facility prior to the early 1970s. Operation of the pond ceased, and the pond was filled in between 1970 and 1973. The material used to fill the top 4-feet within the pond is considered historic fill material. However, a layer of contaminated material is located at the base of the pond, below the surficial, historic fill material.

Since the contaminants are fully contained within the pond, no migration of contaminants has occurred and the contaminants have had no effect on groundwater quality, the proposed and

approved remedial action for this area is to leave the contaminated material layer in place and implement appropriate institutional and engineering controls. In addition, the area of the former pond outflow (headwall) and the area of both former pond inflow locations will be uncovered and sealed within the pond boundaries.

Once this is accomplished, the entire surficial area of the pond will be capped. Since the contaminated material layer within the pond boundaries contains PCBs >500 ppm, this area is included in the PCB remedial plan approved by EPA under TSCA. The area of the former pond is referred to as the "Former On-site Pond TSCA Disposal Area" within the February 2009 TSCA approval issued by EPA. The entire extent of the "Former On-site Pond TSCA Disposal Area" will be covered by the "Consolidated Material TSCA Disposal Area", which will be surrounded by earthen and rip-rap flood protection berms and capped in accordance with TSCA regulations and the February 2009 EPA approval for the Site (6 inch layer of CABC topped with 6 inches of asphalt). A 6 ft. chain link fence will be placed/maintained around the perimeter of Tract 1 and marked with signs in accordance with 40 CFR §761.40 and the M_L marking specified in 40 CFR §761.45(a). Once completed, this area will be included in a Deed Notice. Monitoring well clusters will be installed upgradient and downgradient of this area, and perpetual monitoring and maintenance activities will be conducted. Due to the controls and restrictions, this area will be unsuitable for invasive future use (e.g., building, drainage retention, etc.).

7.2.7 Tract 2

The soils on Tract 2 of the property contain elevated levels of metals and PCBs throughout a large portion of the 2.8 acre parcel. In addition, a relatively smaller volume of the Tract 2 soils along the Tract 1 border (vicinity of sample VI-16) contain elevated concentrations of VOCs.

In accordance with the NJDEP approval of May 25, 2006, Tract 2 will be remediated so that the average concentration of PCBs on Tract 2 is approximately 5 ppm. This will result in the excavation and removal of more than approximately 8,000 cubic yards of material from Tract 2 and will remediate the areas containing the higher levels of VOCs and metals. Material removed from Tract 2 with PCB levels at or above 500 ppm will be disposed off Site. Material removed from Tract 2 with PCB levels between 50 ppm and 499 ppm will be stabilized so they can be compacted and placed into the "Consolidated Material TSCA Disposal Area" discussed above. Material removed from Tract 2 with PCB levels <50 ppm will be placed on Tract 1 for use in subsurface fill that will then be capped with the clean soil and vegetation cap and covered under a deed notice. Following the excavation of the Tract 2 material, confirmatory samples will be collected. Once remediation is completed, Arsynco will restore/mitigate the disturbed area of wetlands back to original elevations, and institutional controls will be implemented as required.

Arsynco also proposes to implement institutional controls for the limited area of historic fill material on Tract 2 where lead was identified above RDCSCC. This area encompasses the upland portion of Tract 2 located along 16th Street, which was filled in during the construction of 16th Street.

7.2.8 Southern Drainage Ditch Along Southern Boundary of Tract 1

Since the southern ditch is exposed to impacted fill material via its bank along Tract 1, NJDEP's May 25, 2006 IRM approval letter required that this ditch be either piped or lined to prevent erosion and leaching from contaminated fill that may remain in this area.

Therefore, Arsynco will remediate soils along the ditch that contain PCBs at or above 50 ppm (as per the PCB remedial plan), replace the excavated material with suitable clean fill material, regrade the length of the ditch and line the ditch (base and banks) with a concrete cloth material. These remedial activities will prevent erosion and eliminate contact with the contamination and fill that may remain along the adjacent Tract 1 upland area.

This area of the property will also be included within the Site-wide deed notice.

7.3 EVALUATION OF PROTECTIVENESS OF APPROVED REMEDIAL ACTIONS

As described above, the remedies for the Site include a combination of:

- in-situ treatment (AS/SVE system);
- soil excavation with off Site disposal;
- consolidation, capping and containment of PCB contaminated soils (50 to 499 ppm) and the former pond area into the TSCA regulated areas;
- remediation of certain impacted soils within the southern ditch, emplacement of clean fill to restore the ditch, and installing a concrete liner (cap) within the ditch to prevent erosion of, and contact with, potential soil contamination remaining in this area;
- remediation of Tract 2 to an average PCB concentration of approximately 5 ppm, with the restoration of Tract 2 (clean soil cap) and replanting of wetland vegetation;
- the installation of a 2 foot thick permeable soil/vegetation cap across the majority of Tract 1 (except for TSCA disposal areas) to address historic fill material contaminants and residual levels of potentially site-related contaminants (PCBs <50 ppm, certain metals, SVOCs, VOCs) that would remain following the active remedial measures noted above; and,
- implementation of additional engineering controls (fencing) and appropriate institutional controls (deed notice), along with the required long term monitoring and maintenance activities (O&M activities).

The soil excavation and off Site disposal remedies and the active AS/SVE remedy will remove contamination from the Site. These remedies, along with proper handling of the waste streams that are generated, will eliminate potential exposure pathways, and these remedies are protective of public health, safety and the environment.

The removal of the additional material (over 8,000 yards) from Tract 2 will also significantly reduce the ambient/background concentrations of contaminants remaining. The restoration back

to original grade and the mitigation replanting of Tract 2 will eliminate contact and prevent direct exposure to the low levels of contaminants that might remain in this area following the extensive excavation. It is thought that a reduction in net contributions will be observed, and no further remediation will be necessary to address ecological risk on Tract 2.

The remaining remedies consist of implementing institutional and engineering controls, including a deed notice, capping, containment and long term monitoring.

The TSCA cap area for the PCBs that will remain on the Site at levels from 50 to 499 ppm and for the former pond will effectively contain and protect these areas, eliminating potential exposure pathways. Coupled with the long term maintenance and monitoring activities, the TSCA cap remedy will be protective of public health, safety and the environment.

As summarized above, the general, Site-wide Tract 1 cap was proposed to address the following:

- historic fill contamination;
- soils with PCB levels <50 ppm that will remain across areas of Tract 1 (including the former building slabs and foundations);
- residual levels of contamination that may remain above the NRDCSCC following excavation and disposal of soils within the area of process-type waste fill material in the southeast part of Tract 1; and,
- levels of VOCs that might remain above NRDCSCC following active treatment in the area of the AS/SVE system on Tract 1 (and that are not adversely impacting groundwater).

Please note that the initial cap proposal for the majority of Tract 1, which was presented in the 2003 RAW and approved by NJDEP in its May 25, 2006 letter, was for the installation of a Site wide asphalt cap. However, an RAW amendment was submitted to NJDEP to change the general Tract 1 cap to a permeable cap using 2 feet of clean soil and mostly vegetation cover, but with gravel cover in some areas. The permeable soil cap amendment was approved by NJDEP in its letter dated April 12, 2016.

The types of contaminants noted above that will be covered by the clean soil and vegetation cap are typically very stable and largely immobile compounds that are normally insoluble in water. PCBs and PAHs in soil have been shown to be immobile at this Site and have not been identified in groundwater. Since the majority of Tract 1 is currently covered with a permeable soil surface, these contaminants would continue to be immobile as a result of installing a permeable cap. Some of the higher levels of metals in Site soils will be excavated and disposed off Site as part of the PCB soil remediation program. However, other metals will remain in Site soils beneath the cap. Some of these metals have been detected in groundwater (most commonly arsenic and lead), and these metals are the result of a regional groundwater quality issue and/or the presence of historic fill material on the Site and throughout the region. The proposed and approved cap would not change or otherwise impact the presence or mobility of these metals in groundwater.

The primary exposure routes for the contaminants of concern that will remain below the cap are dermal contact, ingestion and inhalation, and the proposed permeable soil/vegetation cap will prevent direct exposure to the soil and eliminate these exposure routes.

Other issues that cause the clean soil/vegetation cap to be considered protective of public health, safety and the environment include:

- a. Raising the elevation of Tract 1 of the Site by using a 2 foot clean soil and vegetation cap, along with implementation of a proper monitoring and maintenance program to reduce and control erosion and maintain cap effectiveness, will help protect the Site from the impacts of potential flooding (i.e., the increase in surface elevation with a thicker cap system would subject the Site to less flooding events).
- b. The shallow groundwater table at the Site is within 1 foot of the ground surface, and often shallower in some areas. Adding a thicker clean soil and vegetation cap will create an additional vadose zone to act as a buffer to groundwater.
- c. A permeable soil cap would not significantly reduce infiltration and depress the water table or cause a change in groundwater flow conditions.
- d. A permeable cap would allow for continued natural remediation and biodegradation of VOCs in shallow groundwater by allowing more fresh oxygenated water to percolate through the Site.
- e. A permeable cap would not greatly alter the water balance for the Site. This is important at this Site due to the presence of adjacent wetland areas.
- f. A 2 foot clean soil and vegetation cap would eliminate concerns associated with additional runoff and impacts to surrounding properties. Arsynco conducted an evaluation of stormwater runoff under both existing Site conditions and proposed post-construction conditions following installation of a 2 foot permeable soil and vegetation cap. Based on the hydrologic models and analysis, the proposed permeable cap actually results in a slight decrease in stormwater runoff than current Site conditions. This is important for an area that already experiences regional flooding concerns.

The receptor evaluation has been ongoing process at the Site and has addressed land use, groundwater, vapor intrusion and ecological concerns. No land use, groundwater or vapor intrusion concerns have been documented in connection with the Site. The BEE conducted at the Site looked at the potential for contaminants in soil to reach a receptor, and the results of the BEE suggested a potential for impacts to terrestrial ecological receptors from exposure to certain VOCs, SVOCs, PCBs, and metals in Tract 1 soils. However, it was determined during the BEE that once the proposed remedial measures for Tract 1 were implemented, the migration pathway that exists for these soils would be eliminated.

Arsynco previously submitted a baseline human health risk assessment for PCBs in accordance with the EPA guidance provided. The results of the risk assessment demonstrated that there was no unreasonable risk posed by PCBs in Site soils following implementation of a "baseline" remedy scenario that was specified by EPA, and the results were well within acceptable regulatory risk ranges. The "baseline" remedy specified by EPA was a scenario where material

with PCB concentrations >499 ppm would be excavated and disposed off-Site, and remaining material with concentrations of PCBs from 50 ppm to 499 ppm would be consolidated into one area of the Site but not capped (i.e., left exposed). This "baseline" scenario was found to be within acceptable regulatory risk ranges. Therefore, the installation of the cap controls in the TSCA disposal areas and the 2 foot thick clean soil/vegetation cap across the remainder of Tract 1 will prevent direct exposure to the PCB soils that would remain on Tract 1.

Based on the preceding information, the proposed and approved remedial actions for the Site remain protective of public health, safety and the environment.

7.3.1 AREA I – Parking Lot, Office Buildings and Pond

Area I encompasses the majority of the gravel parking lot located adjacent to 13th Street, the 13th Street entrance to the Site, former Building #2, the two (2) former office buildings (Buildings 16 and 20), and the former non-contact cooling water pond. The boundaries of Area I are illustrated on Figure 2.

Elevated levels of xylenes were detected in surface soils at the discharge point of a floor drain associated with former Building 2. The proposed remedial action for the xylene impact was to treat the area via the AS/SVE system. The AS/SVE system was installed in Area I (Figure 2) and has been operated in this area periodically since December 2014. Effectiveness of the AS/SVE treatment in Area I will be determined via the collection of confirmatory soil samples following treatment. The intent of the AS/SVE system is to remediate levels of VOCs to below the most stringent, applicable criteria, and this remedy remains protective of public health, safety and the environment. Residual levels of VOC contaminants that might remain in Area I following active treatment via the AS/SVE system will be included in the Site-wide deed notice and cap.

Elevated levels of lead and PAHs were also detected in other soil samples within Area I, and Arsynco proposed to address these contaminants under the Site-wide deed notice and cap. The primary exposure routes for the contaminants of concern that will remain below the cap are dermal contact, ingestion and inhalation, and the proposed permeable soil/vegetation cap will prevent direct exposure to the soil and eliminate these exposure routes.

No additional soil contamination has been identified in Area I since submittal of the 2003 RAW. Since the proposed and approved remedial plan for Area I remains protective of public health, safety and the environment, no additional remediation is necessary for Area I at this time.

7.3.2 AREA II – Northwest Portion of Site

Area II extends along the west side of the property, north of Area I and Building 20, as shown on Figure 2.

Elevated levels of PAHs, mercury and nickel were detected in soil sample II-7, collected from an area downgradient from the former paved RCRA Storage Area within Area II. The contaminants at this location were believed to be related the presence of historic fill material. This area was

proposed and approved to be included as part of the Site wide institutional and engineering controls. The primary exposure routes for the contaminants of concern that will remain below the cap are dermal contact, ingestion and inhalation, and the proposed permeable soil/vegetation cap will prevent direct exposure to the soil and eliminate these exposure routes.

In addition, elevated levels of benzene and toluene were detected at the location of soil sample PP-12, located to the west of former Building 1. This area was proposed to be remediated via the AS/SVE system. In fact, soils at the PP-12 located were excavated and placed into the AS/SVE pile (Figure 2) and have been undergoing periodic treatment via the AS/SVE system since December 2014. The intent of the AS/SVE system is to remediate levels of VOCs to below the most stringent, applicable criteria, and this remedy remains protective of public health, safety and the environment. Post-excavation, confirmatory soil samples (sidewalls and base) were collected following soil excavation in the area of sample PP-12, and the results were below the most stringent standards. Information regarding the final remediation of this area will be provided to NJDEP within the subsequent Remedial Action Report (RAR). These soils treated via the AS/SVE system will be resampled for VOCs and EPH following treatment to determine proper disposition.

No additional soil contamination has been identified in Area II since submittal of the 2003 RAW. Since the proposed and approved remedial plan for Area II remains protective of public health, safety and the environment, no additional remediation is necessary for Area II at this time.

7.3.3 AREA III – Northeast Portion of Site

Area III extends from Building 1 and Building 5 to the northern property line, as shown on Figure 2.

Elevated levels of contaminants were detected at soil sample location III-12 (PAHs, arsenic, PCBs, TPHC and VOCs) and at soil samples PP-9 and III-8 (VOCs and TPHC). PCB levels in soil sample III-12 were 3.8 ppm. Sample PP-9 also contained an elevated level of nickel. These samples were located in the area of the Former Drum Cleaning Station in Area III.

The PAHs and arsenic are related to historic fill material and will be addressed by institutional and engineering controls, including the Site wide clean soil cap for Tract 1. The PCB levels and nickel will also be addressed in this fashion. The primary exposure routes for the contaminants of concern that will remain below the cap are dermal contact, ingestion and inhalation, and the proposed permeable soil/vegetation cap will prevent direct exposure to the soil and eliminate these exposure routes.

The levels of TPHC and VOCs detected in soil samples III-12, PP-9 and III-8 will be remediated via the AS/SVE system. In fact, soils at these locations were excavated and placed into the AS/SVE pile and have been undergoing periodic treatment via the AS/SVE system since December 2014. The intent of the AS/SVE system is to remediate levels of VOCs to below the most stringent, applicable criteria, and this remedy remains protective of public health, safety and the environment. Post-excavation, confirmatory soil samples (sidewalls and base) were collected from the areas of samples III-12, PP-9 and III-8 following soil removal in this area, and

the results were below the most stringent standards. Information regarding the final remediation of this area will be provided to NJDEP within the subsequent Remedial Action Report (RAR). These soils treated via the AS/SVE system will be resampled for VOCs and EPH following treatment to determine proper disposition.

No additional soil contamination has been identified in Area III since submittal of the 2003 RAW. Since the proposed and approved remedial plan for Area III remains protective of public health, safety and the environment, no additional remediation is necessary for Area III at this time.

7.3.4 AREA IV – Former Plant Production Area

Area IV is the central portion of the Site and includes the area of the former Site manufacturing buildings (excluding Building 19, which is in Area V). Building #s 1, 3, 4, 5, 6, 7, 8, 9, 12 and 14, as well as the effluent treatment basin (ETB) and nearly all of the facility's subsurface process drainage lines, storage areas and a transformer bank were located within Area IV (Figure 2).

Previous activities conducted in Area IV included the cleaning and removal of the entire subsurface drainage system (lines and catch basins), cleaning and removal of the ETB and the removal of two (2) USTs. In addition, the majority of the concrete floor slabs were sampled and crushed in place. However, the concrete floor slabs from former Building 6 and Building 3/9 were crushed and properly disposed off Site in May and June 2014. Disposal documentation is provided in Appendix C.

Extensive soil sampling was previously conducted throughout Area IV, with emphasis on the ETB, the drainage line system, obvious contamination observed during drainage system removal, as well as other known storage areas, stained areas and areas which were most likely to be affected by Site operations. VOCs are the primary soil contaminants in Area IV and cover a large portion of Area IV. Elevated levels of BNs and lead were also detected in Area IV soils.

The BNs and lead will be addressed via institutional and engineering controls. Contaminant exceedances related to the crushed floor slabs of the former buildings (except Building 3/9 and Building 6) that will remain in place will also be addressed via institutional and engineering controls. The primary exposure routes for the contaminants of concern that will remain below the cap are dermal contact, ingestion and inhalation, and the proposed permeable soil/vegetation cap will prevent direct exposure to the soil and eliminate these exposure routes.

Please note that since the concentration of lead detected in Area IV soil sample IV-10 (27,000 ppm) exceeds the historic fill maximum concentration of 10,700 ppm, NJDEP required that additional vertical delineation of lead be conducted at this location prior to the installation of the institutional and engineering controls. This vertical delineation sampling was completed in February 2016. A single soil boring was installed at the former sample IV-10 location, and a soil sample (sample IV-10A) was collected from a depth of 3.0 to 3.5 feet and analyzed for lead. Lead was detected at a concentration of 59.8 ppm in soil sample IV-10A, completing the vertical delineation of lead in this location. The location of soil sample IV-10A is shown on Figure 3.

The results of soil sample IV-10A are summarized on Table 2, and the laboratory analytical report is provided in Appendix D.

The VOCs in Area IV will be addressed via the AS/SVE system. In fact, VOC impacted soils throughout the majority of Area IV have been undergoing periodic treatment via the installed sections of the AS/SVE system since December 2014 (Figure 2). The intent of the AS/SVE system is to remediate levels of VOCs to below the most stringent, applicable criteria, and this remedy remains protective of public health, safety and the environment. Post-treatment, confirmatory soil samples will be collected from within Area IV following active treatment via the AS/SVE system and analyzed for VO+15. Once the main VOC source areas are treated via the AS/SVE system, and VOC levels in shallow soil and shallow groundwater have been reduced by establishing a decreasing trend, the remedy will transition to a monitored natural attenuation (MNA) program. Residual levels of VOC contaminants that might remain in Area IV following active treatment via the AS/SVE system will be included in the Site-wide deed notice and cap.

No additional soil contamination has been identified in Area IV since submittal of the 2003 RAW. Since the proposed and approved remedial plan for Area IV remains protective of public health, safety and the environment, no additional remediation is necessary for Area IV at this time.

7.3.5 AREA V – Building 19 and Northeast Tank Farm

Area V is located in the northeast portion of Tract 1 (Figure 2). This area of the Site contained former Building 19, a diked aboveground tank farm and a cleared area to the east of the tank farm which had historically been used for various amounts of material and drum staging.

Contaminants of concern in Area V consist of VOCs (BTEX). Some of the VOC impacted soils within Area V will also be excavated and disposed off Site as part of the PCB remediation activities. However, the majority of VOCs in Area V will be addressed via the AS/SVE system sections that will be installed following completion of the PCB remedy for the Site. The intent of the AS/SVE system is to remediate levels of VOCs to below the most stringent, applicable criteria, and this remedy remains protective of public health, safety and the environment.

Post-remediation confirmatory soil samples will be collected from within Area V following active treatment via the AS/SVE system and analyzed for VO+15. Once the main VOC source areas are treated via the AS/SVE system, and VOC levels in shallow soil and shallow groundwater have been reduced by establishing a decreasing trend, the remedy will transition to a monitored natural attenuation (MNA) program.

Residual levels of VOC contaminants that might remain in Area V following active treatment via the AS/SVE system will be included in the Site-wide deed notice and cap. The primary exposure routes for the contaminants of concern that will remain below the cap are dermal contact, ingestion and inhalation, and the proposed permeable soil/vegetation cap will prevent direct exposure to the soil and eliminate these exposure routes.

Since the proposed and approved remedial plan for Area V remains protective of public health, safety and the environment, no additional remediation is necessary for Area V at this time.

7.3.6 AREA VI – Former Pond Area

The former pond (Area VI) is located on the eastern part of Tract 1 (Figure 2) and was formerly used to accept drainage and discharges from the facility prior to the early 1970s. Operation of the pond ceased, and the pond was filled in between 1970 and 1973. The material used to fill the top 4-feet within the pond is considered historic fill material. However, a layer of contaminated material is located at the base of the pond, below the surficial, historic fill material.

As part of the proposed and approved remedial measures for Area VI, the area of the former pond outflow (headwall) and the area of both former pond inflow locations will be uncovered and sealed within the pond boundaries. Once this is accomplished, the entire surficial area of the pond will be capped. Since the contaminated material layer within the pond boundaries contains PCBs >500 ppm, this area is included in the PCB remedial plan approved by EPA under TSCA. The area of the former Pond is referred to as the "Former On-site Pond TSCA Disposal Area" in the February 2009 TSCA approval issued by EPA. The entire extent of the "Former On-site Pond TSCA Disposal Area" will be covered by the "Consolidated Material TSCA Disposal Area", which will be surrounded by earthen and rip-rap flood protection berms and capped in accordance with TSCA regulations and the February 2009 EPA approval for the Site (6 inch layer of CABC topped with 6 inches of asphalt). A 6 ft. chain link fence will be placed/maintained around the perimeter of Tract 1 and marked with signs in accordance with 40 CFR §761.40 and the M_L marking specified in 40 CFR §761.45(a). Once completed, this area will be included in a Deed Notice. Monitoring well clusters will be installed upgradient and downgradient of this area, and perpetual monitoring and maintenance activities will be conducted. Due to the controls and restrictions, this area will be unsuitable for any form of invasive future use (e.g., building, drainage retention, storage, etc.).

The materials within the former pond confines are fully contained and are not migrating beyond the former pond boundaries, and the effective containment of these contaminants will be increased via implementation of the remedial action and will continue to be monitored. The primary exposure routes for the contaminants of concern that will remain in Area VI are groundwater, dermal contact, ingestion and inhalation, and the existing containment controls and the added, proposed TSCA cap and containment remedial measures will prevent direct exposure to the soil and eliminate these exposure routes.

No additional soil contamination has been identified in Area VI since submittal of the 2003 RAW. Since the proposed and approved remedial plan for Area VI remains protective of public health, safety and the environment, no additional remediation is necessary for Area VI at this time.

7.3.7 AREA VII – Primary Tank Farm

The primary tank farm area is located in the approximate center of the Site, south of the former plant production area (Figure 2). Area VII extends from the southern sides of former Buildings 6 and 14, to the rail spur which had intersected the Site. This area encompassed the former main tank farm area, the old tank farm area, the former #6 fuel oil tank (tank 58) and six (6) former ASTs located along the south wall of Building 6.

Contaminants of concern in Area VII consist of VOCs (BTEX). The VOCs in Area VII will be addressed via the AS/SVE system. In fact, VOC impacted soils in Area VII have been undergoing periodic treatment via the installed sections of the AS/SVE system since December 2014. The intent of the AS/SVE system is to remediate levels of VOCs to below the most stringent, applicable criteria, and this remedy remains protective of public health, safety and the environment.

Post-treatment, confirmatory soil samples will be collected from within Area VII following active treatment via the AS/SVE system and analyzed for VO+15. Once the main VOC source areas are treated via the AS/SVE system, and VOC levels in shallow soil and shallow groundwater have been reduced by establishing a decreasing trend, the remedy will transition to a monitored natural attenuation (MNA) program. Residual levels of VOC contaminants that might remain in Area VII following active treatment via the AS/SVE system will be included in the Site-wide deed notice and cap. The primary exposure routes for the contaminants of concern that will remain below the cap are dermal contact, ingestion and inhalation, and the proposed permeable soil/vegetation cap will prevent direct exposure to the soil and eliminate these exposure routes.

No additional soil contamination has been identified in Area VII since submittal of the 2003 RAW. Since the proposed and approved remedial plan for Area VII remains protective of public health, safety and the environment, no additional remediation is necessary for Area VII at this time.

7.3.8 AREA VIII – Southern Portion of Site

Area VIII encompasses the entire southeast portion of Tract 1 (Figure 2). This area of the Site has been entirely filled but has remained essentially undeveloped land. A drainage ditch extends across the southern boundary of Area VIII and marks the southern extent of the Arsynco property in this area of the Site, although portions of the drainage ditch are off-Site. The only buildings that were located in Area VIII were former storage Buildings 17 and 18 and a small shed located in the northeast part of Area VIII, just south of the former pond (Area VI). In addition, a diked 12,000-gallon toluene AST (tank 73) was located in the west portion of Area VIII, adjacent to former Building 2. The former RCRA storage area was also located in Area VIII, to the south of Buildings 17 and 18 and adjacent to the gravel parking lot (Area I).

This area of the Site was filled in the 1950s and 1960s. The fill material encountered within this area of the Site was determined to consist not only of the typical historic fill material encountered in other parts of the Site, but some parts of this area were also determined to contain

industrial and process-type waste materials and some of the most significant concentrations of PCBs detected on the Site. Elevated levels of VOCs, BNs, TPHC, phenols and some metals (primarily lead) have also been detected in this material.

Since the majority of the process-type waste material contains PCBs >500 ppm, the vast majority of material in this area will be excavated and properly disposed off-Site as part of the PCB remedial plan approved by both EPA and NJDEP. Additionally, material with PCB levels between 50 ppm and 499 ppm will be consolidated into the "Consolidated Material TSCA Disposal Area" and capped. Following removal of this material, post-excavation, confirmatory soil sampling will be conducted. Once PCB impacted soils in these areas have been remediated to below 50 ppm (or below 500 ppm if area is within TSCA regulated cap area), the excavation will be complete. Residual contamination that remains above RDCSCC will be included as part of the institutional and engineering controls. Areas with PCBs remaining at levels less than 50 ppm will be capped via the general Site wide cap for Tract 1.

Area VIII also encompasses the southern drainage ditch located along the southern property boundary. Soils along the ditch that contain PCBs at or above 50 ppm will be remediated (as per the PCB remedial plan). The ditch will then be regraded with suitable clean fill material and lined (base and banks) with a concrete cloth material that will prevent erosion and eliminate contact with the contaminated fill that may remain in this area.

The primary exposure routes for the contaminants of concern that will remain below the caps in Area VIII are dermal contact, ingestion and inhalation, and the proposed cap systems (either TSCA cap, clean soil and vegetation cover cap, or concrete ditch liner) will prevent direct exposure to the soil and eliminate these exposure routes.

A small portion in the northern part of Area VIII extending from the north toward soil sample PP-3 contain VOCs in soils. Following completion of the PCB remedy, the remaining VOC impacted soils in this small part of Area VIII will be addressed via the expanded sections of the AS/SVE system, as necessary. The intent of the AS/SVE system is to remediate levels of VOCs to below the most stringent, applicable criteria, and this remedy remains protective of public health, safety and the environment.

No additional soil contamination has been identified in Area VIII since submittal of the 2003 RAW. Since the proposed and approved remedial plan for Area VIII remains protective of public health, safety and the environment, no additional remediation is necessary for Area VIII at this time.

7.3.9 AREA IX - PCB and Site Fill Material Investigation

PCB contaminated soils at the Site will be remediated as described in Section 7.2. Soils with PCBs at and above 50 ppm will be remediated in accordance with the TSCA Approval from EPA (which received concurrence from NJDEP), including the excavation and disposal of soils with PCBs at or above 500 ppm (except Area VI), and the consolidation and TSCA capping and containment of soils with PCBs between 50 and 499 ppm.

Soils containing PCBs <50 ppm will be addressed via the general Site wide Tract 1 clean soil and vegetation cover cap, as approved by NJDEP. The primary exposure routes for the PCB levels that will remain below the caps are dermal contact, ingestion and inhalation. The proposed cap systems (either TSCA cap or clean soil and vegetation cover cap, depending on location on Tract 1) will prevent direct exposure to the soil and eliminate these exposure routes.

Soils with elevated levels of PCBs remaining on the Site will be included within the deed notice, and these areas will require long term monitoring and maintenance. The perimeter of the Site will also be fenced.

Since the proposed and approved remedial plan for Area IX remains protective of public health, safety and the environment, no additional remediation is necessary at this time.

7.3.10 AREA X - Tract 2 (Eastern Side of Site)

The soils on Tract 2 of the property contain elevated levels of metals and PCBs throughout a large portion of the 2.8 acre parcel. In addition, a relatively smaller volume of the Tract 2 soils along the Tract 1 border (vicinity of sample VI-16) contain elevated concentrations of VOCs.

In accordance with the NJDEP approval of May 25, 2006, material on Tract 2 will be remediated so that the average concentration of PCBs on Tract 2 is approximately 5 ppm. This will result in the excavation and removal of more than approximately 8,000 cubic yards of material from Tract 2 and this action will also remediate the areas containing the higher levels of VOCs and metals. During this process, the majority of the low lying areas of Tract 2 will be excavated to depths of at least 2 feet. Following the excavation of the Tract 2 material, confirmatory samples will be collected. Once excavation is completed, Arsynco will restore/mitigate the disturbed area of wetlands back to original elevations (with clean soil and restoration/enhancement of plantings), and institutional controls will be implemented, as required. The restoration of these areas back to original grade will be done using certified clean fill material in accordance with the mitigation plan approved by NJDEP. This clean fill material and revegetation in Tract 2 will serve as a cap in the subject areas. Tract 2 will also be covered under the deed notice.

Arsynco also proposes to implement institutional controls for the limited area of historic fill material on Tract 2 where lead was identified above RDCSCC. This area encompasses the upland portion of Tract 2 located along 16th Street, which was filled in during the construction of 16th Street.

The restoration/mitigation of Tract 2 following soil removal will eliminate contact and prevent direct exposure to the low levels of contaminants that might remain in this area. The removal of the additional material (over 8,000 yards) from Tract 2 will also significantly reduce the ambient/background concentrations of contaminants remaining, and it is thought that a reduction in net contributions will be observed, and no further remediation will be necessary to address ecological risk. Therefore, no additional remediation is necessary for Area X (Tract 2).

7.4 AREA XI - GROUNDWATER

As part of the SI/RI programs, 63 monitoring wells were installed at on-Site and off-Site locations to assess the quality of both shallow and deep groundwater. The results of the groundwater samples collected from the Arsynco monitoring wells through July 2014 were provided to NJDEP in prior report submittals.

As indicated in the November 2014 report, both shallow and deep groundwater at the Site is fully delineated horizontally. Deep groundwater was also largely delineated vertically, although additional vertical delineation of deep groundwater was necessary at the location of MW-38DD.

In March 2015, an additional, deeper triple-cased well (MW-44DD) was installed near MW-38DD to provide further vertical delineation data in deep (DD-zone) groundwater. An additional, deep double-cased well (MW-43D) was also installed at this time to more precisely define the main source area of VOCs in the deep (D-Zone) groundwater downgradient from MW-39D. The locations of the new wells are shown on Figure 4. Installation documentation for the two (2) new deep wells (permits, records, logs, Form Bs) are included in Appendix E.

The new deep wells (MW-43D and MW-44DD) were sampled in April 2015. The results of the April 2015 samples from these wells are summarized on Tables 3 and 4.

An additional round of groundwater samples were also collected from specific Site wells in July 2015. Table 5 provides a comprehensive, well-by-well, tabulated summary of the groundwater sample results for each of the monitoring wells sampled during each sample round from the time the wells were initially installed through July 2015.

The laboratory analytical reports for the additional rounds of groundwater sampling conducted at the Site in 2015 and that are discussed in this report are provided in electronic format on CD-ROMs that are included in Appendix D of this submittal.

Summaries of the information collected from the wells both prior to and after purging during each of the included groundwater sampling events are provided in Appendix F. Depths to groundwater collected from wells prior to each round of sampling, as well as the corresponding groundwater elevation data, are also provided on tables included in Appendix F. Figures 5 through 7 provide groundwater flow maps for both the shallow and deep groundwater zones that were prepared with water levels collected prior to purging and sampling in July 2015.

7.4.1 Additional Well Installation & Survey Program

Two (2) wells were installed on the Site as part of the recent, additional RI program. MW-43D was constructed as a double-cased well within the D-zone groundwater encountered below the native meadow mat and underlying, shallow clay layer at the Site. MW-43D was completed to a depth of 31.5 feet, with 5 feet of screen. Deeper well MW-44DD was constructed as a triple-cased well within the DD-zone groundwater. MW-44DD was completed to a depth of 101.5 feet, with 5 feet of screen.

During installation of MW-43D, the outer steel casing (12-inch diameter) was set into the clay directly beneath the meadow mat to a depth of approximately 16 feet below grade. The borehole was then extended deeper, and the well was constructed with 5-feet of 4-inch Schedule 40 PVC well screen (0.010 slot) and 4-inch PVC inner casings/risers.

During the installation of MW-44DD, the outer steel casing (10-inch diameter) was set into the clay directly beneath the meadow mat to a depth of approximately 14 feet below grade. The borehole was then extended deeper, and a second steel casing (6-inch diameter) was set into a tight gray clay layer at a depth of 40 feet. The borehole was extended again to a depth of approximately 102 feet, and the well was constructed with 5-feet of 2-inch Schedule 40 PVC well screen (0.010 slot) and 2-inch PVC inner casings/risers.

Gravel packs were placed in between the outer borehole walls and the inner PVC well screens and extended at least 2-feet above the top of the screens. The remainder of the annular space from the top of the sand packs to the ground surface was filled with a neat cement and bentonite grout. The inner PVC casings were cut off above the ground surface, and the new wells were finished with stickup, steel protective casings that were set in concrete at the ground surface.

Upon completion of the additional well installation, the new wells were developed by pumping to remove residual, fine materials from the sand pack and to ensure adequate water flow. The wells were allowed to stabilize for at least two (2) weeks following installation and prior to sampling.

The deep wells were constructed in accordance with NJDEP specifications for wells in confined, unconsolidated systems. The Site wells were installed by NJ-licensed well drillers under the direct supervision of a JMC hydrogeologist or geologist. NJDEP Well Permits were obtained for the wells prior to drilling. Monitoring well installation documentation (permits, records, logs, Form A's, Form B's) is included in Appendix E.

Both the development water and the drill cuttings from the installation of wells 43D and 44DD were placed into 55-gallon steel drums for subsequent disposal. A total of 14 drums of cuttings and 13 drums of groundwater were collected and properly disposed off-Site. Disposal documentation is provided in Appendix G. Please note that Appendix G also contains the disposal documentation for the drill cuttings and purge water generated from the installation and development of wells 38DD, 39D, 40D, 41D and 42D in 2014.

7.4.2 Summary of Groundwater Sample Results (April 2015)

On April 13, 2015, the newly installed deep wells were properly purged, and groundwater samples were collected and analyzed for VO+15. Sample results are summarized on Tables 3 and 4.

Slightly elevated levels of trichloroethylene (6.9 ppb), vinyl chloride (4.93 ppb) and benzene (9.05 ppb) were detected in MW-43D. This well is screened in the deep groundwater D-zone and is located downgradient from source area well MW-39D. MW-43D was installed to help better and more precisely define the main source area of D-zone groundwater impacts requiring

remediation. The levels of VOC detected in MW-43D are substantially less than the VOC levels detected in MW-39D or the other source area deep wells, indicating that MW-43D is considered a plume fringe well.

No elevated concentrations of VOCs were detected in DD-zone vertical delineation well MW-44DD during the April 2015 sampling event. This well and sample data completes the vertical delineation of deep groundwater contamination at the Site.

7.4.3 Summary of Groundwater Sample Results (July 2015)

From July 22 to July 24, 2015, groundwater samples were collected from select shallow and deep Site wells based on historic groundwater sampling data from the Site. The results of the groundwater samples from July 2015 are summarized on Table 5.

The following subsections provide a global summary of the groundwater sample results obtained from the sampling of both shallow (S-zone) and the two (2) deep groundwater zones (D-zone and DD-zone) monitored at the Site.

The July 2015 shallow and deep zone groundwater sample data is very similar to the previous groundwater data that has historically been reported.

7.4.3.1 Shallow Groundwater Sample Results (July 2015)

Organic contamination, predominantly BTX compounds, and metals continue to be the primary concern in the shallow zone groundwater. Elevated levels of benzene are entering the northwest corner of the Site in the shallow zone. The main on-Site source of benzene is centered around shallow well MW-33S, with lower levels observed at MW-34S, MW-12S and MW-13S(R). The majority of soils in the area of these wells will be excavated during the PCB remediation activities. The extents of the on-Site source areas do not extend off-Site.

Elevated levels of toluene and total xylenes in shallow groundwater are present in the areas of wells MW-11S, MW-24S and MW-33S. These areas do not extend off-Site and are within the area where the AS/SVE system will be installed and operated. Some of the soils near MW-33S will also be excavated during the PCB remediation activities.

The chlorinated VOCs (Cl VOCs) identified at elevated levels in shallow groundwater include trichloroethene (TCE), cis-1,2-Dichloroethene (cis-DCE), 1,1-Dichloroethene (11DCE), 1,1-dichloroethane (11DCA), chlorinated ethane (CA), vinyl chloride (VC), chloroform (CF), methylene chloride (MeCl) and chlorobenzene (CB). The Cl VOCs were observed in MW-11S(R), MW-23S, MW-33S and MW-34S. Soils at MW-34S and some soils near MW-33S will be excavated during the PCB remediation activities. Wells 11S(R) and 23S, and areas near 33S, are located within the area where the AS/SVE system will be installed and operated.

The only shallow wells where CB is present above the Groundwater Quality Criteria (GWQC) of 50 ppb are MW-4S (54.4 ppb) and MW-11S(R) (59.3 ppb). MW-11S(R) is within the extent of the AS/SVE system, and MW-4S is located in very close proximity to the area where an

additional section of the AS/SVE system may be installed. Natural attenuation mechanisms will also play a role in the remediation of CB in well 4S. It is expected that the operation of the AS/SVE system will address the slight exceedances of chlorobenzene at these locations.

Overall, decreases in the levels of organic compounds in the shallow wells has been observed since monitoring began in February 1995. The extent of Site-related contamination in shallow groundwater has been delineated.

7.4.3.2 Deep Groundwater (D-Zone) Sample Results (July 2015)

The primary contaminants of concern in the deep zone are Cl VOCs, particularly in the areas of deep wells 11D, 22D, 38D and 39D. The concentrations of these contaminants continue to show decreasing trends in the older, established source area wells, and strong evidence of natural attenuation has been observed in the deep zone.

VOC contaminants (primarily Cl VOCs) are also migrating onto the Arsynco property from off-Site at concentrations above the GWQC. Elevated concentrations of TCE are observed entering the northwest corner of the Site from an off-Site source area(s) located to the west and northwest of the Site. The TCE levels consistently detected in deep wells 15D, 8D, 18D, and 16D are related to the off-Site source. A second, off-Site source coming from the adjacent property to the north has impacted MW-12D in the southeast part of Tract 1. Off Site sources were discussed in detail in the November 2014 report.

Similar to previous data, the area of deep groundwater impacted by CB is limited to the northwest part of the Site at MW-8D. Upgradient, off-Site well 29D also typically contains elevated CB levels, although 29D only contained CB at a concentration of 13.6 ppb during the July 2015 sampling event. It is possible that a source of CB was formerly located near MW-8D. However, a more likely reason for the CB levels seen in this area is that they are derived from the continued reductive dechlorination of the dichlorobenzene (DCB) isomers present in the DNAPL source that was identified on the adjacent property to the north. Off Site sources were discussed in detail in the November 2014 report.

Elevated levels of cisDCE and 11DCA are present in the areas of deep wells 11D, 22D (only shows occasional hits of 11DCA), 38D and 39D (cisDCE, but no 11DCA). MW-39D also contains a significant concentration of TCE. Wells 11D, 22D and 38D also contain elevated VC. The source area of Cl VOCs in deep groundwater encompasses the area of wells 11D, 22D, 38D and 39D. Again, this on-Site area of Cl VOC impacts in deep groundwater is isolated, does not extend off-Site and is not migrating.

Elevated concentrations of benzene and toluene in deep groundwater are located at MW-11D and MW-8D. A slightly elevated level of benzene (15 ppb) was also detected at MW-36D in the July 2015 sampling event. The concentration of benzene at MW-8D is derived both from an on-Site source and is migrating onto the Site from the north-northwest.

Toluene was detected at elevated levels in wells 8D, 11D, 38D and 39D. The toluene exceedance at well 8D is isolated to that well, while the toluene extent near well 11D encompasses wells 11D, 38D, and 39D.

Overall, significant decreases in the levels of the primary, higher order chlorinated VOCs has been observed at the Site, while some increases in their breakdown products (daughter compounds) have been seen. These trends indicate that natural attenuation of VOCs in deep groundwater is occurring.

In November 2014 Arsynco submitted an RIR Addendum (Groundwater) and Proposed IRM for Deep Groundwater to NJDEP. The IRM proposal for deep groundwater included pump and treat operations in the areas of the main VOC contamination (wells 8D, 11D, 22D, 38D and 39D), with monitored natural attenuation (MNA) for lower levels of contamination outside the main source area. The IRM proposal for deep groundwater was accepted by NJDEP in its letter dated May 29, 2016. The IRM for deep groundwater is schedule to be implemented following completion of the PCB remediation program.

The extent of Site-related contamination in deep groundwater has been delineated both horizontally and vertically.

8.0 GROUNDWATER CLASSIFICATION EXCEPTION AREA (RESUBMITTAL)

Arsynco initially submitted CEA proposals to NJDEP within the February 2013 RIR Addendum (Groundwater) and RAW for Deep Groundwater report, which included three (3) CEA proposals for:

1. historic fill related contamination in shallow groundwater;
2. Site-related VOC and metals contamination in shallow groundwater; and,
3. Site-related VOC contamination in deep groundwater.

In its August 2013 response letter, NJDEP considered the three (3) CEAs to be acceptable but requested some additional information/clarification. Arsynco's November 2014 report submittal provided NJDEP with the additional CEA information requested. In response, NJDEP's May 29, 2015 letter stated that the CEAs proposed by Arsynco remained acceptable and were approved. However, NJDEP also indicated that it was now the Department's policy to establish one CEA for one plume. Therefore, NJDEP required that the two (2) CEAs for shallow and deep groundwater VOC contamination be combined into a single CEA. NJDEP's May 29, 2015 letter also stated that establishing one CEA rather than two would not require a new proposal from Arsynco. However, in a subsequent telephone conversation with NJDEP on this subject, the Department indicated that Arsynco should submit revised CEA/WRA Fact Sheets with the next RIR submittal.

The revised CEA/WRA Fact Sheets requested by NJDEP are included in Appendix J (CEA for historic fill-related shallow groundwater contamination) and Appendix K (Site-related shallow and deep groundwater contamination). As noted above, these CEAs have already been

approved by NJDEP based upon the detailed information submitted by Arsynco in the February 2013 and November 2014 reports. Therefore, the majority of the background information and details for the CEA revisions are not recreated within the text of this report submittal. Please refer to the February 2013 and November 2014 reports.

It is important to note that even though the Site-related VOC (and metals) contamination in shallow and deep groundwater are now being combined into a single CEA, as required by NJDEP, the main components of the CEA (contaminants, boundaries, and duration) are still different in many respects between the shallow and deep groundwater zones at the Site. However, these differences now cannot be reflected in the revised, combined CEA instrument. As a result, some contaminants listed in the CEA will only be present in shallow groundwater (not deep) and vice versa, but this cannot be differentiated in the CEA. Additionally, there are different remedial proposals for shallow and deep groundwater contamination at the Site, and some contaminants will be remediated in shorter time frames than others. Therefore, the specific contaminants and duration of the combined CEA is expected to require revisions in the future.

8.1 GROUNDWATER CONTAMINANTS NOT RELATED TO ARSYNCO SITE

Shallow Groundwater Zone

The presence of certain VOCs in certain shallow zone wells are not related to the Arsynco Site and are migrating onto the Site from off-site, upgradient sources. As a result, Arsynco is not responsible for these shallow zone contaminants, and they are not included in the proposed CEA. This statement applies to:

- TCE in wells MW-15S and off-site well MW-27S,
- Benzene in off-site well MW-29S, and
- TCE in off-site well MW-32S.

In addition to VOCs, certain concentrations of various metals (including antimony, arsenic, beryllium, cadmium, chromium, lead, mercury, and nickel) are present in many shallow wells located both on-site and off-site. These metals are the result of historic fill material and/or overall, regional groundwater quality. Levels of these metals have been observed at neighboring and nearby sites, including both the Henkel/Cognis site to the north and the Cosan site to the south. The presence of these metals in the shallow groundwater zone is from historic fill material and is not related to the Arsynco Site. The revised CEA/WRA Fact Sheet for these historic fill-related contaminants is provided in Appendix J.

Deep Groundwater Zone

The presence of certain VOCs in certain deep zone wells are also not related to the Arsynco Site and are migrating onto the Site from off-site, upgradient sources. As a result, Arsynco is not responsible for these deep zone contaminants, and they are not included in the proposed CEA. This statement applies to:

- CB, VC and BCEE in MW-6D,
- portions of CB and benzene in MW-8D that are derived from continued reductive dechlorination of dichlorobenzene isomer DNAPL identified on the adjacent property to the north,
- benzene in MW-11D that is derived from continued reductive dechlorination of dichlorobenzene isomer DNAPL identified on the adjacent property to the north,
- PCE, TCE, cisDCE, VC and BCEE in MW-12D,
- TCE, cisDCE and VC in MW-15D,
- TCE, cisDCE and VC in MW-16D,
- TCE in MW-17D,
- TCE, cisDCE, 111TCA and VC in MW-18D,
- TCE and cisDCE in off-site well MW-27D,
- TCE, 11DCE, cisDCE and VC in off-site well MW-28D,
- 12DCA, VC, 14DCB, CB and benzene in off-site well MW-29D, and
- VC in off-site well MW-32D.

The off-site sources of the VOC contaminants in the deep wells listed above were discussed in detail in the February 2013 and November 2014 report submittals.

The metals (arsenic and lead) in the deep groundwater zone are associated with regional, background groundwater quality and are not related to the Arsynco Site. Therefore, these contaminants are not included in the proposed CEA for this Site.

8.2 GROUNDWATER CONTAMINANTS INCLUDED IN REVISED CEAs

CEA for Historic Fill Material Contaminants

The following contaminants that are present in the shallow zone groundwater are related to historic fill material and/or regional, background groundwater quality and not the Arsynco Site.

Antimony	Arsenic
Beryllium	Cadmium
Chromium	Lead
Mercury	Nickel

The CEA/Well Restriction Area (WRA) Fact Sheet Form with the required supporting information for groundwater contamination related to historic fill material is included in Appendix J.

CEA for Site-related (or potentially Site-related) Contaminants

The following Site-related (or potentially Site-related) groundwater contaminants (shallow and/or deep groundwater zones) are included in the CEA:

Chloroform (CF)	Methylene Chloride (DCM)
Tetrachloroethene (PCE)	Trichloroethene (TCE)
1,1-Dichloroethene (11DCE)	cis-1,2-Dichloroethene (cisDCE)
Vinyl Chloride (VC)	1,1-Dichloroethane (11DCA)
1,2-Dichloroethane (12DCA)	Chloroethane (CA)
2-Hexanone	Chlorobenzene (CB)
2-Butanone (MEK)	1,4 Dioxane
1,1,1-Trichloroethane	Benzene (B)
Toluene (T)	Ethylbenzene (E)
Xylenes, total (X)	Acetone
Antimony	Lead
Nickel	Zinc

Please note that at this time it is not known whether the concentrations of the four (4) metals compounds listed above that have been detected in MW-12S (nickel), MW-13S (antimony), and MW-33S (antimony, lead, nickel, and zinc) are related to historic fill material or the Site-related fill material that is present in these areas. As a result, the metals at these locations are being included in the proposed CEA for Site-related groundwater contamination at this time. The CEA may be revised if it is later determined that these metals are related to historic fill material.

The CEA/WRA Fact Sheet Form with the required supporting information for Site-related (or potentially Site-related) groundwater contamination is included in Appendix K.

9.0 QUALITY ASSURANCE PROJECT PLAN

The Quality Assurance Project Plan (QAPP) is provided in Appendix H.

10.0 HEALTH AND SAFETY PLAN

A copy of the Site Health and Safety Plan (HASP) is provided in Appendix I.

11.0 NJDEP SRP FORMS

The following NJDEP SRP forms are required and included with this report submittal:

<u>Form Name/Description</u>	<u>Status</u>
Case Inventory Document (CID) Worksheet	Included (after report cover page)
Cover/Certification Form	Included
Receptor Evaluation Form (updated)	Included

AJ
OMA EVALUATION
SUMMARY OF OMA EXCEEDENCES

All values in mg/kg (ppm)

Sample Number Laboratory Sample Number Sample Depth (ft.) Date Collected	2008 Soil Remediation Standards			May 1999 Soil Cleanup Criteria			AREA III	
	Residential	Non Residential	IGW	Residential Direct Contact	Non Residential Direct Contact	Impact To Ground Water	III-8 12126 1.5-2.0 8/11/94	III-1 N6948 2.5-3 11/29/2
Bis(2-chloroisopropyl)ether							*	*
Bromodichloromethane							*	*
Bromomethane							*	*
Chloroform	0.6	2	0.04	19	28	1	2	3.7
Chloromethane							*	*
Dibromochloromethane							*	*
1,4-Dichlorobenzene	5	13	2	570	10000	100	*	*
1,1-Dichloroethane							*	*
Hexachlorocyclopentadiene							*	*
4-Methylphenol							*	*
Naphthalene	6	17	25	230	4200	100	*	*
1,1,2,2-Tetrachloroethane	1	3	0.007	34	70	1	*	*
1,1,2-Trichloroethane							*	*
COMMENTS/NOTES						DOES NOT APPLY FOR OMA	Location excavated and currently being treated with AS/SVE system	Location excavated currently treated with AS/SVE system

All results reported in mg/kg (ppm)

* - Compound either not analyzed, not detected or detected at level less than most stringent cleanup criteria

SRS = Soil Remediation Standards

AS/SVE = Air Sparge/Soil Vapor Extraction

), INC
N FOR SOIL'S
EEDANCES BY AOC

n mg/kg (ppm)

AREA V	AREA VI	AREA VII					AREA VIII		
DJS-007	VI-16	VII-5	VII-8	VII-8A	VII-8B	VII-14	VIII-20	VIII-21	VIII-22
	E4136-1	96893	15231	N6948-13	N6948-23	96997	N6949-009	N6949-010	N6949-011
	0-0.5	0.0-0.5	1.0-1.5	0.5-1.0'	3.5-4.0'	1.0-1.5	3.5-4.0'	3.5-4.0'	3.0-3.5'
1991	6/6/95	5/6/94	10/27/94	11/29/2001	11/29/2001	5/9/94	11/30/2001	11/30/2001	11/30/2001
*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
*	*	50	*	*	*	50	*	*	*
*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
*	13	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
*	*	*	48	12	9.2	*	36	1300	250
370	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
Location to be excavated and properly disposed off-site	Location to be excavated and properly disposed off-site	Location currently being treated with AS/SVE system	Location currently being treated with AS/SVE system	Location currently being treated with AS/SVE system	Location currently being treated with AS/SVE system	Location currently being treated with AS/SVE system	Location to be excavated and properly disposed off-site	Location to be excavated and properly disposed off-site	Location to be excavated and properly disposed off-site

TABLE 2
ARSYNCO, INC. CARLSTADT, NJ
SOIL SAMPLE SUMMARY

All values reported in mg/kg or Parts per Million (ppm)

Sample #: Lab ID: Date Sampled: Depth(ft):	SOIL CLEANUP CRITERIA			IV-10A 02233-001 03/15/2016 3.0'-3.5'		
	RDCSRS (mg/Kg)	NRDCSRS (mg/Kg)	IGWSSL (mg/Kg)			
Metals (mg/Kg)				Conc	Q	MDL
Lead	400	600	NS	59.8		0.646

RDCSRS - Residential Direct Contact Soil Remediation Standards

NRDCSRS - Non-Residential Direct Contact Soil Remediation Standards

IGWSSL - Default Impact to Groundwater Soil Screening Level

mg/Kg - micrograms per kilogram

ppm - parts per million (milligrams per kilogram)

TABLE 3
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number		MW-43D
Laboratory Sample Number		02903-001
Date Collected		04/13/2015
GC/MS Volatile Organics (ppb)	GWQS	
Bromodichloromethane	1	ND
Chloroform	70	2.96 D
Chloromethane	NS	ND
Methylene chloride	3	ND
Tetrachloroethylene	1	ND
Trichloroethylene	1	6.9 D
1,1-Dichloroethylene	1	ND
cis-1,2-Dichloroethylene	70	14.4 D
trans-1,2-Dichloroethylene	100	ND
Vinyl chloride	1	4.93 D
1,1,1-Trichloroethane	30	ND
1,1-Dichloroethane	50	1.86 DJ
1,2-Dichloroethane	2	ND
Chlorobenzene	50	1.52 D
1,2-Dichlorobenzene	600	ND
1,4-Dichlorobenzene	75	ND
1,2-Dichloropropane	1	ND
Benzene	1	9.05 D
Toluene	600	322 D
Ethylbenzene	700	5.36 D
Xylenes (total)	1000	155 D
2-Butanone (MEK)	300	3.34 D
Acetone	6000	18 D
Isopropyl Benzene	700	1.83 D
TOTAL TARGETED GC/MS Volatiles		547 DJ
TOTAL NON-TARGETED GC/MS Volatiles		339 DJN
GC/MS Semi-volatile Organics (ppb)		
bis(2-Chloroethyl)ether	7	NA
1,2-Dichlorobenzene	600	NA
1,4-Dichlorobenzene	75	NA
Di-n-butyl phthalate	700	NA
Diethyl phthalate	6000	NA
Dimethyl phthalate	100 a	NA
bis(2-Ethylexy)phthalate	3	NA
Isophorone	40	NA
Naphthalene	300	NA
N-Nitrosodiphenylamine	10	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA
PCBs (ppb)	0.5	NA
Metals Analysis (ppb)		
Antimony	6	NA
Arsenic	3	NA
Cadmium	4	NA
Chromium	70	NA
Copper	1300	NA
Lead	5	NA
Mercury	2	NA
Nickel	100	NA
Thallium	2	NA
Selenium	40	NA
Zinc	2000	NA
General Chemistry (ppb)		
Cyanide, Total	100	NA
Phenols	2000	NA
Petroleum Hydrocarbons	NN	NA
Extractable Petroleum Hydrocarbons (EPH)		
EPH (C9 - C28)		NA
EPH (>C28 - C40)		NA
Total EPH (C9 - C40)		NA
Chloride (mg/L)	250000	NA
Total Dissolved Solids (mg/L)	500000	NA

J = Indicates the concentration was reported below the RL but above the MDL.
 NA = Sample not analyzed for this analyte
 ND = Not detected
 D = The compound was reported from the diluted analysis
 N = Presumptive evidence of a compound from the use of GC/MS library search.

TABLE 4
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number		MW-44DD
Laboratory Sample Number		02903-002
Date Collected		04/13/2015
GC/MS Volatile Organics (ppb)	GWQS	
Acetone	6000	ND
Bromodichloromethane	1	ND
Chloroform	70	ND
Chloromethane	NS	ND
Methylene chloride	3	ND
Tetrachloroethylene	1	ND
Trichloroethylene	1	0.795 J
1,1-Dichloroethylene	1	ND
cis-1,2-Dichloroethylene	70	ND
trans-1,2-Dichloroethylene	100	ND
Vinyl chloride	1	ND
1,1,1-Trichloroethane	30	ND
1,1-Dichloroethane	50	ND
1,2-Dichloroethane	2	ND
Chlorobenzene	50	ND
1,2-Dichlorobenzene	600	ND
1,4-Dichlorobenzene	75	ND
1,2-Dichloropropane	1	ND
Benzene	1	0.873 J
Toluene	600	26.5
Ethylbenzene	700	ND
Xylenes (total)	1000	10.4
TOTAL TARGETED GC/MS Volatiles		38.6 J
TOTAL NON-TARGETED GC/MS Volatiles		10.6 JN
GC/MS Semi-volatile Organics (ppb)		
bis(2-Chloroethyl)ether	7	NA
1,2-Dichlorobenzene	600	NA
1,4-Dichlorobenzene	75	NA
Di-n-butyl phthalate	700	NA
Diethyl phthalate	6000	NA
Dimethyl phthalate	100 a	NA
bis(2-Ethylhexyl)phthalate	3	NA
Isophorone	40	NA
Naphthalene	300	NA
N-Nitrosodiphenylamine	10	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA
PCBs (ppb)	0.5	NA
Metals Analysis (ppb)		
Antimony	6	NA
Arsenic	3	NA
Cadmium	4	NA
Chromium	70	NA
Copper	1300	NA
Lead	5	NA
Mercury	2	NA
Nickel	100	NA
Thallium	2	NA
Selenium	40	NA
Zinc	2000	NA
General Chemistry (ppb)		
Cyanide, Total	100	NA
Phenols	2000	NA
Petroleum Hydrocarbons	NN	NA
Extractable Petroleum Hydrocarbons (EPII)		
EPII (C9 - C28)		NA
EPII (>C28 - C40)		NA
Total EPII (C9 - C40)		NA
Chloride (mg/L)	250000	NA
Total Dissolved Solids (mg/L)	500000	NA

J = Indicates the concentration was reported below the RL but above the MDL
 NA = Sample not analyzed for this analyte
 ND = Not detected
 N = Presumptive evidence of a compound from the use of GC/MS library search.

C.

RESULTS SUMMARY

[illegible]

Sample Number	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S
Laboratory Sample Number	19867	E10804-1	E17721-1	E34600-1	E52287-2	E87601-12	P1717-001	N3957	
Date Collected	02/01/1995	04/10/1996	01/14/97	05/19/1998	07/06/1999	03/15/2001	03/05/2002	05/20/02	
GC/MS Volatile Organics (ppb)	GWQS								
Acetone	6000	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	1	ND	ND	ND	ND	NA	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	NA	ND	ND	ND
Carbon disulfide	700	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	NS	ND	ND	ND	ND	NA	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	NA	ND	1.3	B
Tetrachloroethylene	1	ND	ND	ND	ND	NA	ND	ND	ND
Trichloroethylene	1	ND	ND	ND	ND	NA	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND	NA	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	ND	ND	NA	ND	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	NA	ND	ND	ND
Vinyl chloride	1	ND	ND	ND	ND	NA	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	NA	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	NA	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	NA	ND	ND	ND
Chlorobenzene	50	69	58.6	48.0	113	NA	298	62	48.3
1,2-Dichlorobenzene	600	ND	ND	1.5	ND	NA	2.8	0.5	0.55
1,4-Dichlorobenzene	75	ND	ND	0.82	1.9	NA	13	1.8	1.8
1,2-Dichloropropane	1	ND	ND	ND	ND	NA	ND	ND	ND
Benzene	1	50	12.3	20.0	25.2	NA	41.2	4.8	0.46
Toluene	600	0.4	0.83	ND	ND	NA	ND	ND	ND
Ethylbenzene	700	0.6	0.63	ND	ND	NA	1.6	ND	ND
Xylenes (total)	1000	ND	ND	ND	ND	NA	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		120	72.36	70.32	140.1	NA	356.6	69.1	51.1
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	52	9.53	NA	12.7	ND	ND
GC/MS Semi-volatile Organics (ppb)									
bis(2-Chloroethyl)ether	7	ND	ND	NA	NA	NA	NA	ND	NA
1,2-Dichlorobenzene	600	ND	ND	NA	NA	NA	NA	ND	NA
1,4-Dichlorobenzene	75	ND	ND	NA	NA	NA	NA	2.4	NA
Di-n-butyl phthalate	700	ND	ND	NA	NA	NA	NA	ND	NA
Diethyl phthalate	6000	ND	ND	NA	NA	NA	NA	0.6	JB
Dimethyl phthalate	100 a	ND	ND	NA	NA	NA	NA	ND	NA
bis(2-Ethylexyl)phthalate	3	ND	ND	NA	NA	NA	NA	1	J
Isophorone	40	ND	ND	NA	NA	NA	NA	ND	NA
Naphthalene	300	ND	ND	NA	NA	NA	NA	0.5	J
N-Nitrosodiphenylamine	10	ND	ND	NA	NA	NA	NA	ND	NA
TOTAL TARGETED GC/MS Semi-volatiles		ND	0.83	NA	NA	NA	NA	3.9	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		ND	27.6	NA	NA	NA	NA	144.6	NA
PCBs (ppb)	0.5	ND	ND	NA	NA	NA	NA	ND	NA
Metals Analysis (ppb)									
Antimony	6	ND	ND	NA	NA	NA	NA	157	ND
Arsenic	3	7.7	ND	NA	NA	NA	NA	21.2	ND
Cadmium	4	ND	ND	NA	NA	NA	NA	2.7	B
Chromium	70	7.6	ND	NA	NA	NA	NA	1.7	B
Copper	1300	ND	ND	NA	NA	NA	NA	5.7	B
Lead	5	15	6.6	10.6	34.7	4.8	6.3	5.6	26.9
Mercury	2	0.18	ND	NA	NA	NA	NA	ND	NA
Nickel	100	ND	ND	NA	NA	NA	NA	13.4	B
Selenium	40	ND	ND	NA	NA	NA	NA	6.5	NA
Thallium	2	ND	ND	NA	NA	NA	NA	ND	NA
Zinc	2000	ND	ND	NA	NA	NA	NA	44	NA
General Chemistry (ppb)									
Cyanide, Total	100	NA	NA	ND	NA	NA	ND	NA	NA
Phenols	2000	NA	NA	ND	NA	NA	ND	NA	NA
Petroleum Hydrocarbons	NN	ND	ND	NA	NA	NA	NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	2300	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	3800	NA

J = Indicates the concentration was reported below the RL but above the MDL

B = Indicates the analyte was found in the blank and in the sample

NA = Sample not analyzed for this analyte

ND = Not detected

D = The compound was reported from the Diluted analysis

TABLE
ARSY
COMPREHENSIVE GROUND

Sample Number		MW-55	MW-55	MW-55	MW-55	MW-55	MW-55	MW-55	MW-55
Laboratory Sample Number		19868	E10854-3	E17721-2	E33768-8	E52287-8	E87601-13	P1717-002	N394
Date Collected		02/01/1995	04/11/1996	01/14/97	04/28/1998	07/07/1999	03/15/2001	03/05/2002	05/19/
GC/MS Volatile Organics (ppb)		GWQS							
2-Butanone (MEK)	300	ND	ND	ND	ND	ND	ND	ND	N
Acetone	6000	ND	ND	ND	ND	ND	ND	ND	N
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND	N
Chloroform	70	ND	ND	ND	ND	ND	ND	ND	N
Chloromethane	5	ND	ND	ND	ND	ND	ND	ND	N
Methylene chloride	3	260	4.7	82.3	ND	ND	0.46	1.4	B N
Carbon disulfide	700			NA	NA	NA	NA	NA	N
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND	N
Trichloroethylene	1	ND	ND	ND	ND	ND	ND	ND	N
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND	ND	N
cis-1,2-Dichloroethylene	70	ND	ND	ND	ND	ND	ND	ND	N
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND	ND	N
Vinyl chloride	1	ND	ND	ND	ND	ND	ND	ND	N
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND	N
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	ND	ND	N
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND	N
Isopropylbenzene	700	ND	ND	ND	ND	ND	ND	ND	N
Chlorobenzene	50	ND	ND	ND	ND	ND	ND	ND	N
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND	N
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND	N
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	N
Benzene	1	30	ND	9.9	ND	16.7	2.9	2.1	2.
Toluene	600	100	ND	3.0	3.1	ND	2.2	ND	0.6
Ethylbenzene	700	1400	9.9	38.6	6	ND	0.88	0.5	1.
Xylenes (total)	1000	13000	42.5	250	18.5	ND	1.2	ND	0.5
TOTAL TARGETED GC/MS Volatiles		14790	57.1	383.8	27.6	16.7	7.64	2.6	4.7
TOTAL NON-TARGETED GC/MS Volatiles		3220	473	1600	160.7	382.5	275.4	72	17
GC/MS Semi-volatile Organics (ppb)									
bis(2-Chloroethyl)ether	7	ND	ND	ND	ND	ND	NA	ND	N
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	NA	ND	N
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	NA	ND	N
Di-n-butyl phthalate	700	ND	ND	ND	ND	ND	NA	0.3	JB N
Diethyl phthalate	6000	ND	ND	ND	ND	ND	NA	0.7	JB N
Dimethyl phthalate	100 a	ND	ND	ND	ND	ND	NA	ND	N
bis(2-Ethylexyl)phthalate	3	ND	ND	ND	ND	ND	NA	0.9	J N
Isophorone	40	740	391	154	ND	ND	NA	ND	3.
Naphthalene	300	ND	ND	ND	ND	ND	NA	1.3	N
N-Nitrosodiphenylamine	10	ND	ND	ND	ND	ND	NA	ND	N
TOTAL TARGETED GC/MS Semi-volatiles		740	391.6	154	ND	ND	NA	2.2	J 3.
TOTAL NON-TARGETED GC/MS Semi-volatiles		19910	1291.5	2246	758	606.4	NA	285.9	884
PCBs (ppb)		0.5	ND	ND	ND	ND	ND	ND	N
Metals Analysis (ppb)									
Antimony	6	ND	ND	NA	NA	NA	NA	18.8	B N
Arsenic	3	4.4	9.1	11.2	15.3	ND	14.2	18.9	24.
Cadmium	4	ND	ND	NA	NA	NA	NA	ND	N
Chromium	70	ND	ND	NA	NA	NA	NA	1.6	B N
Copper	1300	ND	ND	NA	NA	NA	NA	18.2	B N
Lead	5	ND	7.5	NA	NA	NA	NA	10.7	N
Mercury	2	ND	ND	NA	NA	NA	NA	ND	N
Nickel	100	ND	ND	NA	NA	NA	NA	29.4	B N
Thallium	2	ND	ND	NA	NA	NA	NA	ND	N
Selenium	40	ND	ND	NA	NA	NA	NA	ND	N
Zinc	2000	ND	ND	NA	NA	NA	NA	144	N
General Chemistry (ppb)									
Cyanide, Total	100	NA	NA	ND	NA	NA	ND	NA	N
Phenols	2000	NA	NA	62	NA	NA	ND	NA	N
Petroleum Hydrocarbons	NN	3600	ND	1700	1.1	<0.50	ND	10000	N
Extractable Petroleum Hydrocarbons (EPH)									
EPH (C9 - C28)		NA	NA	NA	NA	NA	NA	NA	N
EPH (>C28 - C40)		NA	NA	NA	NA	NA	NA	NA	N
Total EPH (C9 - C40)		NA	NA	NA	NA	NA	NA	NA	N
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	340	N
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	1200	N

J = Indicates the concentration was reported below the RL but above the MDL

B = Indicates the analyte was found in the blank and in the sample

NA = Sample not analyzed for this analyte

ND = Not detected

N = Presumptive evidence of a compound from the use of GC/MS library search.

C.

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JN

TABLE
ARSYN
COMPREHENSIVE GROUND

Sample Number	MW-8S	MW-8S	MW-8S	MW-8S	MW-8S	MW-8S	MW-8S	MW-8S	MW-
Laboratory Sample Number	19872	E10804-13	E17721-6	E33768-14	E52287-14	E87601-17	P1717-007	N3947	
Date Collected	02/01/1995	04/10/1996	01/14/97	04/28/1998	07/07/1999	03/16/2001	03/04/2002	05/19/21	
GC/MS Volatile Organics (ppb)	GWQS								
2-Butanone (MEK)	300	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	6000	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	ND	1.6	B	ND
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	1	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	50	102	51.6	41.8	7	61.2	13	18.2
1,2-Dichlorobenzene	600	ND	ND	3.9	2.4	ND	1.6	0.7	0.76
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	700	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NS	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1	86	100	103	71.9	16.4	79.4	25	11.5
Toluene	600	1400	655	156	1.9	0.65	9.7	0.5	0.71
Ethylbenzene	700	78	352	168	49.1	ND	5.2	ND	0.28
Xylenes (total)	1000	590	1350	749	89.3	2	197	3.8	4.5
TOTAL TARGETED GC/MS Volatiles		2204	2559	1231.5	256.4	26.05	354.1	43	35.95
TOTAL NON-TARGETED GC/MS Volatiles		801	2142	916	395.7	350.2	364	260	148.1
GC/MS Semi-volatile Organics (ppb)									
bis(2-Chloroethyl)ether	7	ND	ND	NA	NA	NA	NA	ND	NA
1,2-Dichlorobenzene	600	ND	ND	NA	NA	NA	NA	ND	NA
1,4-Dichlorobenzene	75	ND	ND	NA	NA	NA	NA	ND	NA
Di-n-butyl phthalate	700	ND	ND	NA	NA	NA	NA	0.4	JB
Diethyl phthalate	6000	ND	ND	NA	NA	NA	NA	0.7	JB
Dimethyl phthalate	100 a	ND	ND	NA	NA	NA	NA	ND	NA
bis(2-Ethylexyl)phthalate	3	ND	ND	NA	NA	NA	NA	4.3	NA
Fluoranthene	300	ND	ND	NA	NA	NA	NA	ND	NA
Isophorone	40	6.5	6	NA	NA	NA	NA	ND	NA
Naphthalene	300	ND	ND	NA	NA	NA	NA	ND	NA
N-Nitrosodiphenylamine	10	ND	ND	NA	NA	NA	NA	ND	NA
TOTAL TARGETED GC/MS Semi-volatiles		6.6	11.3	NA	NA	NA	NA	4.3	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		ND	2904	NA	NA	NA	NA	634	NA
PCBs (ppb)	0.5	36	ND	ND	NA	NA	NA	ND	NA
Metals Analysis (ppb)									
Antimony	6	ND	ND	NA	NA	NA	NA	ND	NA
Arsenic	3	12.5	15.3	11.2	12.7	36.2	ND	7.2	B
Cadmium	4	ND	ND	NA	NA	NA	NA	ND	NA
Chromium	70	130	135	94.4	123	188	29.6	17.7	32
Copper	1300	ND	ND	NA	NA	NA	NA	7.9	B
Lead	5	11.3	19.7	7.2	13	251	10.7	13.4	30.7
Mercury	2	0.09	0.84	NA	NA	NA	NA	ND	NA
Nickel	100	ND	ND	NA	NA	NA	NA	18.7	B
Thallium	2	ND	ND	NA	NA	NA	NA	ND	NA
Selenium	40	ND	ND	NA	NA	NA	NA	ND	NA
Zinc	2000	ND	ND	NA	NA	NA	NA	46	NA
General Chemistry (ppb)									
Cyanide, Total	100	NA	NA	ND	NA	NA	0.012	NA	NA
Phenols	2000	NA	NA	0.11	NA	NA	ND	NA	NA
Petroleum Hydrocarbons	NN	ND	ND	NA	NA	NA	NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	620	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	1900	NA

J = Indicates the concentration was reported below the RL but above the MDL

B = Indicates the analyte was found in the blank and in the sample

NA = Sample not analyzed for this analyte

ND = Not detected

N = Presumptive evidence of a compound from the use of GC/MS library search.

C.

[illegible]

TABLE
ARSYN
COMPREHENSIVE GROUND

Sample Number		MW-8D	MW-8D	MW-8D	MW-8D	MW-8D	MW-8D	MW-8D	MW-8D	MW-8D	MW-8D
Laboratory Sample Number		19873	E10804-14	E17721-7	E33768-15	E52287-13	E87601-18	P1717-008	N39474-5	N67695-7	N99350-5
Date Collected		02/01/1995	04/10/1996	01/14/97	04/28/1998	07/07/1999	03/16/2001	03/04/2002	05/19/2003	05/20/2004	05/18/2005
GC/MS Volatile Organics (ppb)		GWQS									
4-Methyl-2-pentanone (MIBK)	N/S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	70	140	89.8	65.9	208	83.6	206	180	39.7	27	91.5
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	ND	ND	ND	ND	ND	13.7	17	ND	5.3	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	ND	ND	ND	ND	ND	ND	3.7	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	0.4 u	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	670	441	657	1370	1380	1600	990	643	816	998
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	16.1	20	ND	10.7	27.6
1,3-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	6.4	14.8	26	ND	9.8	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1	1100	912	1150	1760	1300	1640	3000	1380	934	1840
Toluene	600	2700	2050	2130	4420	1930	3060	7300	3610	1590	6540
Ethylbenzene	700	ND	62.8	78.2	203	136	399	230	161	302	340
Xylenes (total)	1000	150	146	176	391	194	385	420	261	206	419
TOTAL TARGETED GC/MS Volatiles		4760	3701.6	4257.1	8352	5030	7334.6	12183	6094.7	3904.5	10256.1
TOTAL NON-TARGETED GC/MS Volatiles		22300	10768	6436	16650	4104	4075	6500	24500	7968	29800
GC/MS Semi-volatile Organics (ppb)											
4-Chloroaniline	30	ND	ND	NA	NA	NA	NA	ND	15.8	8.2	ND
bis(2-Chloroethyl)ether	7	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	4.9	NA	NA	NA	NA	18	14.9	10.8	6.7
1,3-Dichlorobenzene	600	ND	ND	NA	NA	NA	NA	2.1	1.3	0.93	0.47
1,4-Dichlorobenzene	75	ND	4	NA	NA	NA	NA	18	10.7	9	4.7
Di-n-butyl phthalate	700	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND
Diethyl phthalate	6000	ND	ND	NA	NA	NA	NA	2.9	B	ND	ND
Dimethyl phthalate	100 u	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	3	ND	ND	NA	NA	NA	NA	1.8	ND	ND	ND
Isophorone	40	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND
Naphthalene	300	ND	ND	NA	NA	NA	NA	ND	0.84	1.3	J
N-Nitrosodiphenylamine	10	ND	ND	NA	NA	NA	NA	ND	0.87	0.96	J
1,2,4-Trichlorobenzene	9	ND	ND	NA	NA	NA	NA	ND	0.77	J	ND
TOTAL TARGETED GC/MS Semi-volatiles		ND	13.83	NA	NA	NA	NA	39.9	28.61	31.19	11.87
TOTAL NON-TARGETED GC/MS Semi-volatiles		ND	2553	J	NA	NA	NA	2355	J	7480	J
PCBs (ppb)		0.5	ND	ND	NA	NA	NA	ND	NA	NA	NA
Metals Analysis (ppb)											
Antimony	6	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA
Arsenic	3	2.7	15.2	15.6	8.3	8.4	28.8	5.7	B	19.3	15.9
Cadmium	4	ND	ND	NA	ND	NA	NA	ND	NA	NA	NA
Chromium	70	ND	ND	NA	NA	NA	NA	1.6	B	NA	NA
Copper	1300	ND	ND	NA	NA	NA	NA	4.1	B	NA	NA
Lead	5	ND	ND	NA	NA	NA	NA	3.6	NA	NA	NA
Mercury	2	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA
Nickel	100	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA
Thallium	2	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA
Selenium	40	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA
Zinc	2000	ND	ND	NA	NA	NA	NA	51.4	NA	NA	NA
General Chemistry (ppb)											
Cyanide, Total	100	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
Phenols	2000	NA	NA	0.38	NA	NA	1	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	1600	0.8	1100	1.7	0.52	1.6	4700	0.97	690	740
Extractable Petroleum Hydrocarbons (EPH)											
EPH (C9 - C28)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C28 - C40)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total EPH (C9 - C40)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (mg/L)	25000	NA	NA	NA	NA	NA	NA	3600	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	6500	NA	NA	NA

* = Samples collected from different depths along screened interval (sample "A" = upper 5 feet of screened interval; sample "B" = bottom 5 feet of screened interval.)

J = Indicates the concentration was reported below the RL but above the MDL.

NS = Well Not Sampled

NA = Sample not analyzed for this analyte

ND = Not detected

D = The compound was reported from the diluted analysis

N = Presumptive evidence of a compound from the use of GC/MS library search.

RESULTS SUMMARY

[illegible]

TABLE
ARSYI
COMPREHENSIVE GROUND

Sample Number	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S
Laboratory Sample Number	19878	E10804-15	E17764-4	E3768-11	E52287-1	E87601-22	P1717-013	P1717-013	N3
Date Collected	02/01/1995	04/10/1996	01/15/97	04/28/1998	07/06/1999	03/15/2001	03/05/2002	05/1	05/1
GC/MS Volatile Organics (ppb)	GWQS								
Acetone	6000	NA	NA	NA	NA	NA	NA	NA	
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND	
Chloroform	70	ND	ND	ND	ND	ND	ND	ND	
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND	
Methylene chloride	3	ND	ND	ND	ND	ND	ND	5.2	
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND	
Trichloroethylene	1	ND	ND	ND	ND	ND	ND	1.4	
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND	4.5	
cis-1,2-Dichloroethylene	70	7100	1950	24300	ND	4300	ND	ND	
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND	ND	
Vinyl chloride	1	ND	ND	1780	ND	ND	ND	190	
1,1,1-Trichloroethane	30	ND	1570	ND	ND	ND	ND	ND	
1,1-Dichloroethane	50	4900	2490	12300	1750	2960	104	470	
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND	
Chloroethane	5 a	ND	ND	ND	ND	ND	ND	160	
Chlorobenzene	50	ND	ND	ND	ND	ND	ND	17	
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND	
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	
Benzene	1	ND	ND	ND	ND	ND	ND	7.6	
Toluene	600	250000	245000	289000	222000	228000	13800	28000	36
Ethylbenzene	700	8600	9820	7420	11000	9790	734	1200	9
Xylenes (total)	1000	43000	52300	38300	60400	48000	5340	8100	81
TOTAL TARGETED GC/MS Volatiles		313600	313130	373100	295150	293050	19978	38155.7	45
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	ND	ND	ND	ND	ND	
GC/MS Semi-volatile Organics (ppb)									
Acetophenone	700	NA	NA	NA	NA	NA	NA	NA	
Benzaldehyde	NS	NA	NA	NA	NA	NA	NA	NA	
4-Chloroaniline	NS	ND	ND	ND	ND	ND	ND	ND	
Benzo(a)anthracene	0.1	ND	ND	NA	NA	NA	NA	ND	
bis(2-Chloroethyl)ether	7	ND	ND	NA	NA	NA	NA	ND	
1,2-Dichlorobenzene	600	ND	ND	NA	NA	NA	NA	ND	
1,4-Dichlorobenzene	75	ND	ND	NA	NA	NA	NA	ND	
Di-n-butyl phthalate	700	ND	ND	NA	NA	NA	NA	ND	
Diethyl phthalate	6000	ND	ND	NA	NA	NA	NA	ND	
Dimethyl phthalate	100 a	ND	ND	NA	NA	NA	NA	ND	
bis(2-Ethylhexyl)phthalate	3	ND	ND	NA	NA	NA	NA	1.1	
Isophorone	40	ND	ND	NA	NA	NA	NA	ND	
Naphthalene	300	ND	ND	NA	NA	NA	NA	ND	
N-Nitrosodiphenylamine	10	ND	ND	NA	NA	NA	NA	ND	
TOTAL TARGETED GC/MS Semi-volatiles		ND	2.7	NA	NA	NA	NA	1.1	
TOTAL NON-TARGETED GC/MS Semi-volatiles		50690	3064	NA	NA	NA	NA	1329	
PCBs (ppb)	0.5	ND	ND	NA	NA	NA	NA	ND	
Metals Analysis (ppb)									
Antimony	6	ND	ND	NA	NA	NA	NA	8.8 B	
Arsenic	3	3.6	ND	NA	NA	NA	NA	ND	
Cadmium	4	ND	ND	NA	NA	NA	NA	ND	
Chromium	70	ND	10.1	NA	NA	NA	NA	7.2 B	
Copper	1300	ND	ND	NA	NA	NA	NA	108	
Lead	5	181	162	42.0	143	16.6	66.8	121	85
Mercury	2	ND	0.22	NA	NA	NA	NA	ND	
Nickel	100	ND	ND	NA	NA	NA	NA	41	
Thallium	2	ND	ND	NA	NA	NA	NA	ND	
Selenium	40	ND	ND	NA	NA	NA	NA	ND	
Zinc	2000	ND	ND	NA	NA	NA	NA	258	
General Chemistry (ppb)									
Cyanide, Total	100	NA	NA	ND	NA	NA	ND	NA	
Phenols	2000	NA	NA	4100	NA	4.2	0.44	NA	
Petroleum Hydrocarbons	NN	46800	70200	108000	16600	22100	2100	4200	32
Extractable Petroleum Hydrocarbons (EPH)									
EPH (C9 - C28)		NA	NA	NA	NA	NA	NA	NA	
EPH (>C28 - C40)		NA	NA	NA	NA	NA	NA	NA	
Total EPH (C9 - C40)		NA	NA	NA	NA	NA	NA	NA	
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	200	
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	1200	

J = Indicates the concentration was reported below the RL but above the MDL

B = Indicates the analyte was found in the blank and in the sample

NS = Well Not Sampled

NA = Sample not analyzed for this analyte

ND = Not detected

D = The compound was reported from the Diluted analysis

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TABLE 5 (cont)
ARSYNCO, IN
COMPREHENSIVE GROUNDWATER

Sample Number		MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D
Laboratory Sample Number		19879	K18884-16	K17764-2	E33768-10	K53287-9	K87601-1	P1717-014	N39474-8	N67695-9	N99473-7	
Date Collected		02/01/1995	04/10/1995	01/15/97	04/28/1998	07/07/1999	03/15/2001	03/05/2002	05/19/2003	05/20/2004	05/19/2005	
GC/MS Volatile Organics (ppb)		GWQ5										
Acetone	6000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	3	250000	473	12200	1890	805	2870	250	404	148	86	
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	5400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	138	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	46000	221	8500	2930	5610	2880	ND	441	156	1810	
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	1	8100	11500	30500	27800	40400	47900	26000	8930	2780	15100	
1,1,1-Trichloroethane	30	ND	ND	4560	1720	4610	2070	2000	1300	170	333	
1,1-Dichloroethane	50	ND	519	3160	3260	3980	3350	3300	1480	1170	2790	
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND	336	91.1	252	
Cyclohexane	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	50	ND	ND	ND	ND	ND	ND	35	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	700	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1	ND	ND	ND	ND	ND	47.8	28	355	18.7	29.7	
Toluene	600	5900	1500	15500	16500	24100	16700	19000	12400	8060	11500	
Ethylbenzene	700	ND	15.4	212	271	369	330	330	399	94.7	145	
Xylenes (total)	1000	ND	27.5	792	977	1480	1320	1340	1190	384	580	
TOTAL TARGETED GC/MS Volatiles		315400	14283.9	75562	55348	81354	77467.8	52283	27245	13072.5	32625.7	
TOTAL NON-TARGETED GC/MS Volatiles		ND	2900	3400	3400	2600	4.56	26	5630	630	2260	
GC/MS Semi-volatile Organics (ppb)												
1-Chloronitrobenzene	30	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	NA
bis(2-Chloroethyl)ether	7	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	NA
1,2-Dichlorobenzene	600	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	NA
1,4-Dichlorobenzene	75	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	NA
Di-n-butyl phthalate	700	ND	ND	ND	ND	NA	NA	0.3	JB	NA	NA	NA
Diethyl phthalate	6000	ND	ND	ND	ND	NA	NA	0.8	JB	NA	NA	NA
Dimethyl phthalate	100	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	3	ND	ND	1.2	ND	NA	NA	1.1	NA	NA	NA	NA
Isophorone	40	15000	50.2	6.0	ND	NA	NA	ND	NA	NA	NA	NA
Naphthalene	300	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	NA
Phenanthrene	100	ND	ND	ND	ND	NA	NA	37	NA	NA	NA	NA
N-Nitrosodiphenylamine	10	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		16400	50.95	7.2	ND	NA	NA	38.1	NA	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		ND	891.3	5103	34720	NA	NA	963	NA	NA	NA	NA
PCBs (ppb)		0.5	ND	ND	NA	NA	NA	ND	NA	NA	NA	NA
Metals Analysis (ppb)												
Antimony	5	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA
Arsenic	3	2.3	20.9	23.0	33	11.2	23.1	29.4	32.4	24.4	32.2	
Cadmium	4	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA
Chromium	70	ND	ND	NA	NA	NA	NA	16.4	NA	NA	NA	NA
Copper	1300	ND	ND	NA	NA	NA	NA	88.5	NA	NA	NA	NA
Lead	5	1.4	ND	NA	NA	NA	NA	11.2	4.6	15.6	24.3	
Mercury	2	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA
Nickel	100	ND	ND	NA	NA	NA	NA	6.8	NA	NA	NA	NA
Thallium	2	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA
Selenium	40	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA
Zinc	2000	ND	ND	NA	NA	NA	NA	73.6	NA	NA	NA	NA
General Chemistry (ppb)												
Cyanide, Total	100	NA	NA	ND	NA	NA	<0.010	NA	NA	NA	NA	NA
Phenols	2000	NA	NA	3000	NA	NA	2.9	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	1300	1400	3300	5600	2100	3300	8400	1000	1300	260	
Extractable Petroleum Hydrocarbons (EPH)												
EPH (C9 - C28)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPH (>C28 - C40)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total EPH (C9 - C40)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	5700	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	13000	NA	NA	NA	NA

* = Samples collected from different depths along screened interval (sample "A" = upper 5 feet of screened interval; sample "B" = bottom 5 feet of screened interval.)

J = Indicates the concentration was reported below the RL but above the MDL

B = Indicates the analyte was found in the blank and in the sample

a = Interim Specific Ground Water Quality Criteria

b = Interim Generic Ground Water Quality Criteria

NA = Sample not analyzed for this analyte

ND = Not detected

D = The compound was reported from the Diluted analysis

N = Presumptive evidence of a compound from the use of GC/MS library search.

TABLE
ARSYN
COMPREHENSIVE GROUND

Sample Number	MW-11DD	MW-11DD	MW-11DD	MW-11DD	MW-11DD	MW-11DD	MW-11DD	MW-11DD
Laboratory Sample Number	E10854-1	E17764-3	E33943-3	E52287-10	E87601-2	P1717-015	N39574-6	N
Date Collected	04/10/1996	01/15/97	05/01/1998	07/07/1999	03/15/2001	03/05/2002	05/20/2003	0
GC/MS Volatile Organics (ppb)		GWQS						
Carbon Tetrachloride	1	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	3	50.8	37.9	18.1	9.7	5	3.1	B 3
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	2.5	1.1	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	1	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	1.2	0.29	ND	ND
Toluene	600	ND	1.1	ND	0.16	ND	1.1	1.2
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	1000	ND	ND	ND	ND	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		53.3	40.1	18.1	11.06	5.29	1.1	4.2
TOTAL NON-TARGETED GC/MS Volatiles		ND	3	180	ND	ND	ND	ND
GC/MS Semi-volatile Organics (ppb)								
bis(2-Chloroethyl)ether	7	ND	ND	NA	NA	NA	ND	NA
1,2-Dichlorobenzene	600	ND	ND	NA	NA	NA	ND	NA
1,4-Dichlorobenzene	75	ND	ND	NA	NA	NA	ND	NA
Di-n-butyl phthalate	700	ND	ND	NA	NA	NA	ND	NA
Diethyl phthalate	6000	ND	ND	NA	NA	NA	0.5	JB NA
Dimethyl phthalate	100 a	ND	ND	NA	NA	NA	ND	NA
bis(2-Ethylhexyl)phthalate	3	ND	ND	NA	NA	NA	2	NA
Isophorone	40	ND	5.6	NA	NA	NA	ND	NA
Naphthalene	300	ND	ND	NA	NA	NA	ND	NA
N-Nitrosodiphenylamine	10	ND	ND	NA	NA	NA	ND	NA
TOTAL TARGETED GC/MS Semi-volatiles		ND	5.6	NA	NA	NA	2	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		39.8	80.8	NA	NA	NA	55.3	NA
PCBs (ppb)		0.5	ND	ND	NA	NA	NA	ND
Metals Analysis (ppb)								
Antimony	6	ND	ND	NA	NA	NA	ND	NA
Arsenic	3	ND	ND	NA	NA	NA	ND	NA
Cadmium	4	ND	ND	NA	NA	NA	ND	NA
Chromium	70	14.2	36.7	NA	NA	NA	1.3	B NA
Copper	1300	ND	ND	NA	NA	NA	29.3	NA
Lead	5	ND	4.8	NA	NA	NA	6.3	NA
Mercury	2	ND	ND	NA	NA	NA	ND	NA
Nickel	100	ND	62.6	NA	NA	NA	3.3	B NA
Thallium	2	ND	ND	NA	NA	NA	ND	NA
Selenium	40	ND	ND	NA	NA	NA	ND	NA
Zinc	2000	ND	23.4	NA	NA	NA	39.3	NA
General Chemistry (ppb)								
Cyanide, Total	100	ND	ND	NA	NA	NA	NA	NA
Phenols	2000	ND	ND	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	ND	1800	ND	ND	NA	8100	ND
Extractable Petroleum Hydrocarbons (EPH)								
EPH (C9 - C28)		NA	NA	NA	NA	NA	NA	NA
EPH (>C28 - C40)		NA	NA	NA	NA	NA	NA	NA
Total EPH (C9 - C40)		NA	NA	NA	NA	NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	5.9	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	410	NA

J = Indicates the concentration was reported below the RL but above the MDL
 B = Indicates the analyte was found in the blank and in the sample
 NS = Well Not Sampled
 NA = Sample not analyzed for this analyte
 ND = Not detected

C.

R RESULTS SUMMARY

TABLE
ARSYI
COMPREHENSIVE GROUND

Sample Number	MW-12S	MW-12S	MW-12S	MW-12S	MW-12S	MW-12S	MW-12S
Laboratory Sample Number	19880	E10804-8	E17721-12	E33768-6	E52287-18	E87601-3	P1717-016
Date Collected	02/01/1995	04/10/1996	01/14/97	04/28/1998	07/07/1999	03/15/2001	03/05/2002
GC/MS Volatile Organics (ppb)							
	GWQS						
Acetone	6000	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	300	ND	ND	ND	ND	ND	ND
Bromodichloromethane	1	ND	ND	ND	ND	ND	1.7
Chloroform	70	ND	ND	ND	ND	1.7	ND
Carbon disulfide	700	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND
Methylene chloride	3	7500	ND	ND	117	0.44	1.4
Tetrachloroethylene	1	ND	11.8	5.8	8.7	ND	2.3
Trichloroethylene	1	ND	1.5	3.1	3.2	ND	4.3
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	3.5	3.5	ND	2.7
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND
Vinyl chloride	1	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	0.6
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND
1,4 Dioxane	0.4 a	NA	NA	NA	NA	NA	NA
Benzene	1	ND	ND	5.9	11.1	43.4	5.5
Toluene	600	93	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	4.6	ND	ND	ND
Xylenes (total)	1000	ND	ND	ND	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		7593	13.3	22.9	26.5	160.4	23.54
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	92	124.3	ND	ND
GC/MS Semi-volatile Organics (ppb)							
bis(2-Chloroethyl)ether	7	72	ND	2.9	NA	NA	ND
1,2-Dichlorobenzene	600	ND	ND	ND	NA	NA	ND
1,4-Dichlorobenzene	75	ND	ND	ND	NA	NA	ND
Di-n-butyl phthalate	700	ND	ND	ND	NA	NA	0.3
Diethyl phthalate	6000	ND	ND	ND	NA	NA	0.4
Dimethyl phthalate	100 a	ND	ND	ND	NA	NA	ND
bis(2-Ethylexyl)phthalate	3	ND	ND	ND	NA	NA	ND
Isophorone	40	4.7	ND	4.3	NA	NA	ND
Naphthalene	300	ND	ND	ND	NA	NA	0.6
N-Nitrosodiphenylamine	10	ND	ND	ND	NA	NA	ND
TOTAL TARGETED GC/MS Semi-volatiles		1605	ND	4.3	NA	NA	0.6
TOTAL NON-TARGETED GC/MS Semi-volatiles		457	36.7	349.8	NA	NA	164.9
PCBs (ppb)							
	0.5	3.7	ND	ND	NA	NA	NA
Metals Analysis (ppb)							
Antimony	6	ND	ND	NA	NA	NA	5.3
Arsenic	3	4.4	ND	NA	NA	NA	ND
Cadmium	4	ND	ND	NA	NA	NA	ND
Chromium	70	ND	ND	NA	NA	NA	1.2
Copper	1300	ND	ND	NA	NA	NA	16.4
Lead	5	ND	3.6	NA	NA	NA	3.7
Mercury	2	ND	ND	NA	NA	NA	ND
Nickel	100	243	536	1560	208	153	656
Thallium	2	ND	ND	NA	NA	NA	ND
Selenium	40	ND	ND	NA	NA	NA	ND
Zinc	2000	ND	ND	NA	NA	NA	66.7
General Chemistry (ppb)							
Cyanide, Total	100	ND	ND	ND	NA	NA	NA
Phenols	2000	ND	ND	ND	NA	NA	NA
Petroleum Hydrocarbons	NN	ND	ND	NA	NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	79
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	1800

J = Indicates the concentration was reported below the RL but above the MDL
B = Indicates the analyte was found in the blank and in the sample
NA = Sample not analyzed for this analyte
ND = Not detected
N = Presumptive evidence of a compound from the use of GC/MS library search.

3

REFERENCES

[illegible]

TABLE
ARSY
COMPREHENSIVE GROUND

Sample Number	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-
Laboratory Sample Number	19881	E10804-9	E17721-13	E33768-5	E52287-17	E87601-4	P1717-017	P1717-017	N395
Date Collected	02/01/1995	04/10/1996	1/14/97	04/28/1998	07/07/1999	03/15/2001	03/05/2002	03/05/2002	05/20/
GC/MS Volatile Organics (ppb)	GWQS								
Methyl tert-butyl ether (MTBE)	70								
Bromodichloromethane	1	ND	ND	ND	NA	NA	NA	ND	NI
Chloroform	70	ND	ND	ND	NA	NA	NA	ND	NI
Chloromethane	NS	ND	ND	ND	NA	NA	NA	ND	NI
Methylene chloride	3	ND	ND	ND	NA	NA	NA	1.4	NI
Tetrachloroethylene	1	13	ND	ND	NA	NA	NA	45	171
Trichloroethylene	1	17	ND	ND	NA	NA	NA	37	105
1,1-Dichloroethylene	1	ND	ND	ND	NA	NA	NA	ND	NI
cis-1,2-Dichloroethylene	70	17	ND	ND	NA	NA	NA	ND	14.7
trans-1,2-Dichloroethylene	100	ND	ND	ND	NA	NA	NA	3.6	12.5
Vinyl chloride	1	ND	ND	ND	NA	NA	NA	ND	NI
1,1,1-Trichloroethane	30	ND	ND	ND	NA	NA	NA	ND	NI
1,1-Dichloroethane	50	ND	ND	ND	NA	NA	NA	ND	NI
1,2-Dichloroethane	2	ND	ND	ND	NA	NA	NA	ND	NI
1,4-Dioxane	0.4 a	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	50	ND	ND	ND	NA	NA	NA	ND	NI
1,2-Dichlorobenzene	600	ND	ND	ND	NA	NA	NA	ND	NI
1,4-Dichlorobenzene	75	ND	ND	ND	NA	NA	NA	ND	NI
1,2-Dichloropropane	1	ND	ND	ND	NA	NA	NA	ND	NI
1,2,4-Trichlorobenzene	9	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1	26	0.33	ND	NA	NA	NA	ND	NI
Toluene	600	45	1.1	ND	NA	NA	NA	ND	NI
Ethylbenzene	700	11	ND	ND	NA	NA	NA	ND	NI
Xylenes (total)	1000	48	ND	ND	NA	NA	NA	ND	NI
TOTAL TARGETED GC/MS Volatiles		177	1.43	ND	NA	NA	NA	85.6	307
TOTAL NON-TARGETED GC/MS Volatiles		1559	9	7	NA	NA	NA	15.3	NC
GC/MS Semi-volatile Organics (ppb)									
bis(2-Chloroethyl)ether	7	9800	147	88.6	ND	46.9	42.7	22	23.2
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	700	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	6000	ND	ND	ND	ND	ND	ND	0.4	JB
Dimethyl phthalate	100 a	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylexyl)phthalate	3	ND	ND	ND	ND	ND	ND	0.8	J
Isophorone	40	ND	ND	ND	ND	3.7	ND	ND	ND
Naphthalene	300	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	10	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL TARGETED GC/MS Semi-volatiles		6400	147.79	88.6	ND	50.6	42.7	22.8	23.2
TOTAL NON-TARGETED GC/MS Semi-volatiles		ND	79.7	34.4	26	51.1	260	77	63.9
PCBs (ppb)	0.5	ND	ND	NA	NA	NA	NA	ND	NA
Metals Analysis (ppb)									
Antimony	6	ND	ND	NA	NA	NA	NA	ND	NA
Arsenic	3	6	ND	NA	NA	NA	NA	5.2	B
Cadmium	4	ND	ND	NA	NA	NA	NA	ND	NA
Chromium	70	96.4	ND	NA	NA	NA	NA	1.6	B
Copper	1300	ND	ND	NA	NA	NA	NA	1.5	B
Lead	5	ND	ND	NA	NA	NA	NA	ND	NA
Mercury	2	ND	ND	NA	NA	NA	NA	ND	NA
Nickel	100	ND	ND	NA	NA	NA	NA	ND	NA
Thallium	2	ND	ND	NA	NA	NA	NA	ND	NA
Selenium	40	ND	ND	NA	NA	NA	NA	ND	NA
Zinc	2000	ND	ND	NA	NA	NA	NA	31.5	NA
General Chemistry (ppb)									
Cyanide, Total	100	NA	NA	0.067	NA	NA	ND	NA	NA
Phenols	2000	NA	NA	<50	NA	NA	ND	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA	NA	NA	NA	ND
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	1120	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	1900	NA

J = Indicates the concentration was reported below the RL but above the MDL
 B = Indicates the analyte was found in the blank and in the sample
 NA = Sample not analyzed for this analyte
 ND = Not detected
 N = Presumptive evidence of a compound from the use of GC/MS library search.

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R RESULTS SUMMARY

[illegible]

TABL
ARS1
COMPREHENSIVE GROUP

Sample Number		MW-13S(R)	MW-13S(R)	MW-13S(R)	MW-13S(R)	MW-13S(R)	MW-13S(R)	MW-13S(R)
Laboratory Sample Number		E10804-6	E17721-14	E33768-4	E52287-15	E87601-5	P1717-018	N39574-9
Date Collected		04/10/1996	1/14/97	04/28/1998	07/07/1999	03/15/2001	03/06/2002	05/20/2003
GC/MS Volatile Organics (ppb)		GWQS						
Acetone	6000	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	NS	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	300	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	1	ND	ND	ND	NA	NA	ND	ND
Chloroform	70	ND	ND	ND	NA	NA	ND	ND
Carbon disulfide	700	NA	NA	NA	NA	NA	NA	NA
Chloromethane	NS	ND	ND	ND	NA	NA	ND	ND
Methylene chloride	3	ND	ND	ND	NA	NA	1.5	B
Tetrachloroethylene	1	ND	ND	ND	NA	NA	ND	ND
Trichloroethylene	1	ND	ND	ND	NA	NA	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	NA	NA	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	ND	NA	NA	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	NA	NA	ND	ND
Vinyl chloride	1	ND	ND	ND	NA	NA	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	NA	NA	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	NA	NA	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	NA	NA	ND	ND
Chloroethane	5 a	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	NA	NA	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	NA	NA	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	NA	NA	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	NA	NA	ND	ND
Methylcyclohexane	NS	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NS	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NS	NA	NA	NA	NA	NA	NA	NA
Benzene	1	56.3	16.3	31.8	183	41.3	11	312
Toluene	1000	196	70.7	59.7	NA	NA	19	346
Ethylbenzene	600	60.8	31.5	29.6	NA	NA	17	201
Xylenes (total)	1000	639	312	252	NA	NA	136	1340
TOTAL TARGETED GC/MS Volatiles		952.1	430.5	373.1	NA	NA	183	2199
TOTAL NON-TARGETED GC/MS Volatiles		906	732	562	NA	NA	524	1777
GC/MS Semi-volatile Organics (ppb)								
bis(2-Chloroethyl)ether	7	ND	ND	ND	ND	NA	ND	NA
1,2-Dichlorobenzene	600	ND	ND	ND	ND	NA	ND	NA
1,4-Dichlorobenzene	75	ND	ND	ND	ND	NA	ND	NA
Di-n-butyl phthalate	700	26.3	81.4	2.9	ND	NA	1.1	JB
Diethyl phthalate	6000	3.6	3.9	1.6	3.3	NA	1.6	B
Dimethyl phthalate	100 a	1	J	ND	ND	NA	ND	NA
bis(2-Ethylhexyl)phthalate	3	2.7	34.7	1.3	J	6.2	3.8	NA
Butylbenzylphthalate	100	ND	ND	ND	ND	NA	0.5	JB
Isophorone	40	3.3	ND	ND	ND	NA	ND	NA
Naphthalene	300	25.2	35.3	17.1	222	NA	4.4	NA
Phenanthrene	100 b	ND	ND	ND	ND	NA	0.5	J
Pyrene	200	ND	ND	ND	ND	NA	0.3	J
N-Nitrosodiphenylamine	10	ND	ND	ND	ND	NA	ND	NA
TOTAL TARGETED GC/MS Semi-volatiles		62.1	155.3	22.9	231.5	NA	9	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		866	792	421	1837	NA	314	NA
PCBs (ppb)		0.5	ND	5.1	ND	1.4	ND	ND
Metals Analysis (ppb)								
Antimony	6	143	143	379	53.8	308	442	178
Arsenic	3	8.6	9.8	16.4	<5.0	7.5	ND	ND
Cadmium	4	13.5	14.9	56.4	6.5	36.7	13.4	28.3
Chromium	70	21.6	100	15.4	<10	NA	5.8	B
Copper	1300	103	76.4	83	NA	NA	39.6	NA
Lead	5	164	412	168	24.4	116	83.8	84.9
Mercury	2	ND	0.36	NA	NA	NA	ND	NA
Nickel	100	77.4	68	NA	NA	NA	153	NA
Thallium	2	ND	ND	NA	NA	NA	ND	NA
Selenium	40	ND	ND	NA	NA	NA	31.4	NA
Zinc	2000	3410	3080	NA	NA	NA	1670	NA
General Chemistry (ppb)								
Cyanide, Total	100	ND	37	NA	NA	NA	NA	NA
Phenols	2000	760	3200	0.28	NA	0.069	NA	NA
Petroleum Hydrocarbons	NN	600	510	650	ND	ND	NA	NA
Extractable Petroleum Hydrocarbons (EPH)								
EPH (C9 - C28)		NA	NA	NA	NA	NA	NA	NA
EPH (>C28 - C40)		NA	NA	NA	NA	NA	NA	NA
Total EPH (C9 - C40)		NA	NA	NA	NA	NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	32	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	380	NA

J = Indicates the concentration was reported below the RL but above the MDL.

B = Indicates the analyte was found in the blank and in the sample

b = Interim Generic Ground Water Quality Criteria

NA = Sample not analyzed for this analyte

ND = Not detected

D = The compound was reported from the Diluted analysis

N = Presumptive evidence of a compound from the use of GC/MS library search.

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TABLE
ARSY
COMPREHENSIVE GROUND

Sample Number		MW-15D	MW-15D	MW-15D	MW-15D	MW-15D	MW-15D	MW-15D
Laboratory Sample Number		E10804-12	E17721-16	E33943-7	E52287-12	E87601-10	P1717-023	N394
Date Collected		04/10/1996	1/14/97	05/01/1998	07/07/1999	03/16/2001	03/04/2002	05/19/
GC/MS Volatile Organics (ppb)		GWQS						
Methyl Tert Butyl Ether (MTBE)	70	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	ND	1.2	B
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	397	408	411	264	248	260	20
1,1-Dichloroethylene	1	ND	3.5	4.5	1.7	2.5	1.1	ND
cis-1,2-Dichloroethylene	70	529	487	373	207	178	ND	13
trans-1,2-Dichloroethylene	100	13.8	9.6	9.6	4.6	7.2	5	4.3
Vinyl chloride	1	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	1.4	1.4	ND	1
Chlorobenzene	50	31.9	24.9	4.6	1.2	0.74	ND	0.6
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	0.4 a	NA	NA	NA	NA	NA	NA	NA
Benzene	1	ND	ND	ND	ND	ND	ND	ND
Toluene	600	ND	ND	ND	2.9	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	1000	ND	ND	ND	ND	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		971.7	933	802.7	482.8	437.84	266.1	347.
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	720	ND	ND	150	ND
GC/MS Semi-volatile Organics (ppb)								
bis(2-Chloroethyl)ether	7	ND	ND	NA	NA	NA	ND	NA
1,2-Dichlorobenzene	600	ND	ND	NA	NA	NA	ND	NA
1,4-Dichlorobenzene	75	ND	ND	NA	NA	NA	ND	NA
Di-n-butyl phthalate	700	ND	ND	NA	NA	NA	ND	NA
Diethyl phthalate	6000	ND	ND	NA	NA	NA	0.8	JB
Dimethyl phthalate	100 a	ND	ND	NA	NA	NA	ND	NA
bis(2-Ethylexyl)phthalate	3	0.6	J 2.7	NA	NA	NA	1.4	NA
Isophorone	40	ND	ND	NA	NA	NA	ND	NA
Naphthalene	300	ND	ND	NA	NA	NA	3.9	NA
Phenanthrene	100 b	ND	ND	NA	NA	NA	0.9	J
Fluorene	300	ND	ND	NA	NA	NA	0.3	J
N-Nitrosodiphenylamine	10	ND	ND	NA	NA	NA	ND	NA
TOTAL TARGETED GC/MS Semi-volatiles		0.6	2.7	NA	NA	NA	6.5	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		36.2	11.8	NA	NA	NA	132.5	NA
PCBs (ppb)		0.5	ND	ND	NA	NA	NA	ND
Metals Analysis (ppb)								
Antimony	6	ND	ND	NA	NA	NA	ND	NA
Arsenic	3	ND	5.8	NA	NA	NA	ND	NA
Cadmium	4	ND	ND	NA	NA	NA	ND	NA
Chromium	70	ND	ND	NA	NA	NA	1.6	B
Copper	1300	ND	ND	NA	NA	NA	14.2	B
Lead	5	3.6	ND	NA	NA	NA	ND	NA
Mercury	2	ND	ND	NA	NA	NA	ND	NA
Nickel	100	ND	ND	NA	NA	NA	2.4	B
Thallium	2	ND	ND	NA	NA	NA	ND	NA
Selenium	40	ND	ND	NA	NA	NA	ND	NA
Zinc	2000	40.3	ND	NA	NA	NA	28.8	NA
General Chemistry (ppb)								
Cyanide, Total	100	ND	ND	NA	NA	NA	NA	NA
Phenols	2000	ND	ND	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	ND	ND	NA	NA	NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	175	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	680	NA

J = Indicates the concentration was reported below the RL but above the MDL
 B = Indicates the analyte was found in the blank and in the sample
 b = Interim Generic Ground Water Quality Criteria
 NS = Well Not Sampled
 NA = Sample not analyzed for this analyte
 ND = Not detected
 N = Presumptive evidence of a compound from the use of GC/MS library search.

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RESULTS SUMMARY

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TABLE
ARSYN
COMPREHENSIVE GROUND

Sample Number		MW-16D	MW-16D	MW-16D	MW-16D	MW-16D	MW-16D	MW-16D	
Laboratory Sample Number		E10854-6	E17721-19	E33943-8	E52287-7	E87601-11	P1717-024	N39474-10	
Date Collected		04/10/1996	1/14/97	05/01/1998	07/07/1999	03/16/2001	03/04/2002	05/19/2003	
GC/MS Volatile Organics (ppb)		GWQS							
Methyl Tert Butyl Ether (MTBE)	70	ND	ND	ND	ND	ND	ND	ND	
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND	
Chloroform	70	ND	ND	ND	ND	ND	ND	ND	
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND	
Methylene chloride	3	ND	ND	ND	ND	0.49	ND	ND	
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND	
Trichloroethylene	1	377	428	233	215	252	310	204	
1,1-Dichloroethylene	1	ND	ND	1.8	1.5	2.8	1.6	ND	
cis-1,2-Dichloroethylene	70	772	540	269	195	257	ND	147	
trans-1,2-Dichloroethylene	100	8.4	7.6	4.3	3.8	7.4	ND	4.1	
Vinyl chloride	1	ND	4.8	ND	2.6	2.4	3	ND	
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethane	2	ND	4.3	ND	2.1	3.1	ND	1.9	
Chlorobenzene	50	41.4	55.0	7.8	2.6	0.82	20	1.8	
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND	
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND	
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	
Benzene	1	ND	ND	ND	ND	ND	ND	ND	
Toluene	600	ND	ND	ND	0.26	ND	1.6	ND	
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND	
Xylenes (total)	1000	ND	ND	ND	ND	ND	ND	ND	
TOTAL TARGETED GC/MS Volatiles		1198.8	1039.7	515.9	422.86	526.01	336.2	358.8	
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	790	ND	ND	270	ND	
GC/MS Semi-volatile Organics (ppb)									
bis(2-Chloroethyl)ether	7	0.95	J	ND	NA	NA	0.4	J	NA
1,2-Dichlorobenzene	600	ND	ND	NA	NA	NA	ND	NA	NA
1,4-Dichlorobenzene	75	ND	ND	NA	NA	NA	ND	NA	NA
Di-n-butyl phthalate	700	ND	ND	NA	NA	NA	ND	NA	NA
Diethyl phthalate	6000	ND	ND	NA	NA	NA	0.8	JB	NA
Dimethyl phthalate	100 a	ND	ND	NA	NA	NA	ND	NA	NA
bis(2-Ethylexyl)phthalate	3	1.2	J	4.5	NA	NA	4.8	NA	NA
Fluorene	300	ND	ND	NA	NA	NA	ND	NA	NA
Isophorone	40	ND	ND	NA	NA	NA	ND	NA	NA
Naphthalene	300	ND	ND	NA	NA	NA	ND	NA	NA
N-Nitrosodiphenylamine	10	ND	ND	NA	NA	NA	ND	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		2.15	4.5	NA	NA	NA	5.2	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		26	4.9	NA	NA	NA	10.6	NA	NA
PCBs (ppb)		0.5	ND	ND	NA	NA	NA	ND	NA
Metals Analysis (ppb)									
Antimony	6	ND	ND	NA	NA	NA	ND	NA	NA
Arsenic	3	ND	ND	NA	NA	NA	ND	NA	NA
Cadmium	4	ND	ND	NA	NA	NA	ND	NA	NA
Chromium	70	ND	ND	NA	NA	NA	ND	NA	NA
Copper	1300	ND	30.1	NA	NA	NA	2.5	B	NA
Lead	5	ND	ND	NA	NA	NA	ND	NA	NA
Mercury	2	ND	ND	NA	NA	NA	ND	NA	NA
Nickel	100	ND	ND	NA	NA	NA	2.4	B	NA
Thallium	2	ND	5.5	NA	NA	NA	ND	NA	NA
Selenium	40	ND	ND	NA	NA	NA	ND	NA	NA
Zinc	2000	ND	ND	NA	NA	NA	31.6	NA	NA
General Chemistry (ppb)									
Cyanide, Total	100	ND	ND	NA	NA	NA	NA	NA	NA
Phenols	2000	ND	ND	NA	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	ND	ND	NA	NA	NA	NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	100	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	560	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
 B = Indicates the analyte was found in the blank and in the sample
 NA = Sample not analyzed for this analyte
 ND = Not detected

R RESULTS SUMMARY

TABLI
ARSY
COMPREHENSIVE GROUND

Sample Number		MW-17D	MW-17D	MW-17D	MW-17D	MW-17D
Laboratory Sample Number		P1717-026	N39474-12	N67695-18	N99350-25	J435
Date Collected		03/04/2002	05/19/2003	05/19/2004	05/18/2005	10/10/2005
GC/MS Volatile Organics (ppb)		GWQS				
Bromodichloromethane	1	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND
Methylene chloride	3	2.8	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND	ND
Trichloroethylene	1	7.2	6.2	6.2	8.9	4.0
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	1.5	1.3	2	0.7
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND
Vinyl chloride	1	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND
Toluene	600	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND
Xylenes (total)	1000	ND	0.27	J	ND	ND
TOTAL TARGETED GC/MS Volatiles		7.2	7.97	7.5	10.9	5.2
TOTAL NON-TARGETED GC/MS Volatiles		11.4	ND	ND	ND	ND
GC/MS Semi-volatile Organics (ppb)						
bis(2-Chloroethyl)ether	7	ND	NA	NA	NA	NA
1,2-Dichlorobenzene	600	ND	NA	NA	NA	NA
1,4-Dichlorobenzene	75	ND	NA	NA	NA	NA
Di-n-butyl phthalate	700	1.3	JB	NA	NA	NA
Diethyl phthalate	6000	0.8	JB	NA	NA	NA
Dimethyl phthalate	100 a	ND	NA	NA	NA	NA
bis(2-Ethylexyl)phthalate	3	0.9	J	NA	NA	NA
Isophorone	40	ND	NA	NA	NA	NA
Naphthalene	300	0.3	J	NA	NA	NA
N-Nitrosodiphenylamine	10	ND	NA	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		1.2	NA	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		145.6	NA	NA	NA	NA
PCBs (ppb)		0.5				
		ND	NA	NA	NA	NA
Metals Analysis (ppb)						
Antimony	6	ND	NA	ND	NA	9
Arsenic	3	5.4	B	13.9	20	1
Cadmium	4	ND	NA	ND	NA	NA
Chromium	70	10.2	NA	ND	NA	NA
Copper	1300	11.6	B	NA	NA	NA
Lead	5	7.8	NA	ND	NA	4
Mercury	2	ND	NA	ND	NA	NA
Nickel	100	11	B	NA	NA	NA
Thallium	2	ND	NA	ND	NA	NA
Selenium	40	ND	NA	ND	NA	NA
Zinc	2000	46	NA	ND	NA	NA
General Chemistry (ppb)						
Cyanide, Total	100	NA	NA	NA	NA	NA
Phenols	2000	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA	NA
Chloride (mg/L)	250000	150	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	530	NA	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
 B = Indicates the analyte was found in the blank and in the sample
 NA = Sample not analyzed for this analyte
 ND = Not detected

NC.

ER RESULTS SUMMARY

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TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER R

Sample Number	MW-18D	MW-18D	MW-18D	MW-18D	MW
Laboratory Sample Number	P1717-027	N39574-14	N67695-19	N99471-12	J435
Date Collected	03/04/2002	05/19/2003	05/19/2004	05/19/2005	10/10
GC/MS Volatile Organics (ppb)	GWQS				
Methyl Tert Butyl Ether (MTBE)	70	NA	NA	NA	N
Bromodichloromethane	1	ND	ND	ND	N
Chloroform	70	ND	ND	ND	N
Chloromethane	NS	ND	ND	ND	N
Methylene chloride	3	2.6	B	ND	N
Tetrachloroethylene	1	ND	ND	ND	N
Trichloroethylene	1	120	42.5	45.2	59.9
1,1-Dichloroethylene	1	1.5	ND	ND	0.
cis-1,2-Dichloroethylene	70	ND	263	322	249
trans-1,2-Dichloroethylene	100	8.3	7.8	9.2	15.9
Vinyl chloride	1	ND	2.3	3.6	3.2
1,1,1-Trichloroethane	30	ND	ND	ND	N
1,1-Dichloroethane	50	ND	ND	ND	N
1,2-Dichloroethane	2	ND	ND	ND	0.
Chlorobenzene	50	37	8.1	4.6	8.2
1,2-Dichlorobenzene	600	1.5	0.55	J	ND
1,4-Dichlorobenzene	75	1.8	ND	ND	0.
1,2-Dichloropropane	1	ND	ND	ND	N
Benzene	1	1.1	ND	ND	N
Toluene	600	ND	ND	ND	N
Ethylbenzene	700	ND	ND	ND	N
Xylenes (total)	1000	ND	ND	ND	N
TOTAL TARGETED GC/MS Volatiles		173.8	324.25	384.6	337.6
TOTAL NON-TARGETED GC/MS Volatiles		320	ND	ND	ND
GC/MS Semi-volatile Organics (ppb)					
bis(2-Chloroethyl)ether	7	ND	NA	NA	NA
1,2-Dichlorobenzene	600	ND	NA	NA	NA
1,4-Dichlorobenzene	75	1.9	NA	NA	NA
Di-n-butyl phthalate	700	ND	NA	NA	NA
Diethyl phthalate	6000	0.5	JB	NA	NA
Dimethyl phthalate	100 a	ND	NA	NA	NA
bis(2-Ethylexy)phthalate	3	2.9	NA	NA	NA
Isophorone	40	ND	NA	NA	NA
Naphthalene	300	0.4	J	NA	NA
Phenanthrene	100 b	0.3	J	NA	NA
N-Nitrosodiphenylamine	10	ND	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		5.5	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		57.9	NA	NA	NA
PCBs (ppb)	0.5	ND	NA	NA	NA
Metals Analysis (ppb)					
Antimony	6	ND	NA	NA	NA
Arsenic	3	ND	NA	NA	NA
Cadmium	4	ND	NA	NA	NA
Chromium	70	ND	NA	NA	NA
Copper	1300	ND	NA	NA	NA
Lead	5	ND	NA	NA	NA
Mercury	2	ND	NA	NA	NA
Nickel	100	ND	NA	NA	NA
Thallium	2	ND	NA	NA	NA
Selenium	40	ND	NA	NA	NA
Zinc	2000	25.5	NA	NA	NA
General Chemistry (ppb)					
Cyanide, Total	100	NA	NA	NA	NA
Phenols	2000	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA
Chloride (mg/L)	250000	120	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	430	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
B = Indicates the analyte was found in the blank and in the sample
b = Interim Generic Ground Water Quality Criteria
NA = Sample not analyzed for this analyte
ND = Not detected

S SUMMARY

[illegible]

TABL
ARSY
COMPREHENSIVE GROUN

Sample Number	MW-22S	MW-22S	MW-22S	MW-22S	MW-22S
Laboratory Sample Number	P1717-031	N39574-16	N67695-23	N99471-16	J43546-
Date Collected	03/06/2002	05/20/2003	05/20/2004	05/19/2005	10/11/20
GC/MS Volatile Organics (ppb)		GWQS			
Acetone	6000	ND	ND	ND	ND
Bromodichloromethane	1	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND
Trichloroethylene	1	ND	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND
Vinyl chloride	1	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND
Benzene	1	ND	0.32	ND	ND
Toluene	600	ND	ND	0.51 J	ND
Ethylbenzene	700	ND	ND	ND	ND
Xylenes (total)	1000	2.6	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		2.6	0.32	0.51	ND
TOTAL NON-TARGETED GC/MS Volatiles		4.2	9.6	30 J	26 J
GC/MS Semi-volatile Organics (ppb)					
bis(2-Chloroethyl) ether	7	ND	NA	NA	NA
1,2-Dichlorobenzene	600	ND	NA	NA	NA
1,4-Dichlorobenzene	75	ND	NA	NA	NA
Di-n-butyl phthalate	700	0.9 J	NA	NA	NA
Diethyl phthalate	6000	1.2 B	NA	NA	NA
Dimethyl phthalate	100 a	ND	NA	NA	NA
bis(2-Ethylexyl)phthalate	3	6.8	NA	NA	NA
Isophorone	40	ND	NA	NA	NA
Naphthalene	300	ND	NA	NA	NA
N-Nitrosodiphenylamine	10	ND	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		7.7	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		80.1	NA	NA	NA
PCBs (ppb)	0.5	ND	NA	NA	NA
Metals Analysis (ppb)					
Antimony	6	ND	ND	NA	NA
Arsenic	3	6.2 B	35.3	11.1	31.7
Cadmium	4	ND	ND	NA	NA
Chromium	70	3 B	ND	NA	NA
Copper	1300	27.4	ND	NA	NA
Lead	5	5.4	ND	NA	NA
Mercury	2	ND	ND	NA	NA
Nickel	100	3 B	ND	NA	NA
Thallium	2	ND	ND	NA	NA
Selenium	40	ND	ND	NA	NA
Zinc	2000	52.6	ND	NA	NA
General Chemistry (ppb)					
Cyanide, Total	100	ND	NA	NA	NA
Phenols	2000	30	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA
Chloride (mg/L)	25000	2400	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	3300	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
 B = Indicates the analyte was found in the blank and in the sample
 NS = Well Not Sampled
 NA = Sample not analyzed for this analyte
 ND = Not detected
 N = Presumptive evidence of a compound from the use of GC/MS library search.

ATER RESULTS SUMMARY

5.4

TABL
ARSY
COMPREHENSIVE GROUP

Sample Number	MW-22D	MW-22D	MW-22D	MW-22D	MW-22D	MW-22D	MW-22D
Laboratory Sample Number	P1717-032	N39474-15	N67695-24	N99471-24	J43546-32	J84520-32	JA14554-4
Date Collected	03/06/2002	05/19/2003	05/20/2004	05/19/2005	10/11/2006	02/29/2008	03/18/2005
GC/MS Volatile Organics (ppb)							
	GWQS						
Acetone	6000	ND	ND	ND	ND	ND	ND
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND
Methylene chloride	3	3.3	B	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	1400	736	308	2220	2070	98.1
1,1-Dichloroethylene	1	22	ND	ND	ND	57.5	J
cis-1,2-Dichloroethylene	70	ND	47000	82500	121000	144000	139000
trans-1,2-Dichloroethylene	100	ND	ND	ND	218	402	257
Vinyl chloride	1	520	624	1350	2950	2660	4000
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	261	445
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	24	ND	ND	ND	105	195
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NS	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	9	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND
Benzene	1	22	ND	ND	ND	70.5	J
Toluene	600	150	ND	126	257	353	621
Ethylbenzene	700	48	ND	ND	ND	41.6	74.7
Xylenes (total)	1000	98	ND	ND	ND	64.2	165
TOTAL TARGETED GC/MS Volatiles		2284	48360	84284	126645	150084.8	144934.3
TOTAL NON-TARGETED GC/MS Volatiles		6.9	ND	ND	ND	ND	162744
GC/MS Semi-volatile Organics (ppb)							
bis(2-Chloroethyl)ether	7	ND	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	ND	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	ND	NA	NA	NA	NA	NA
Di-n-butyl phthalate	100	ND	NA	NA	NA	NA	NA
Diethyl phthalate	6000	0.3	JB	NA	NA	NA	NA
Dimethyl phthalate	100 a	ND	NA	NA	NA	NA	NA
bis(2-Ethylexyl)phthalate	3	5.8	NA	NA	NA	NA	NA
Isophorone	40	ND	NA	NA	NA	NA	NA
Phenanthrene	100 b	0.5	J	NA	NA	NA	NA
Naphthalene	300	0.8	J	NA	NA	NA	NA
N-Nitrosodiphenylamine	10	ND	NA	NA	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		7.1	NA	NA	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		1066.5	NA	NA	NA	NA	NA
PCBs (ppb)							
	0.5	ND	NA	NA	NA	NA	NA
Metals Analysis (ppb)							
Antimony	6	ND	ND	NA	NA	NA	NA
Arsenic	3	15.3	8.1	9.7	15.3	27	ND
Cadmium	4	ND	ND	NA	NA	NA	NA
Chromium	70	43.4	ND	NA	NA	NA	NA
Copper	1300	46.2	ND	NA	NA	NA	NA
Lead	5	25.5	5	6.3	ND	7	6.6
Mercury	2	ND	ND	NA	NA	NA	NA
Nickel	100	26.2	B	NA	NA	NA	NA
Thallium	2	ND	ND	NA	NA	NA	NA
Selenium	40	ND	ND	NA	NA	NA	NA
Zinc	2000	105	26.3	NA	NA	NA	NA
General Chemistry (ppb)							
Cyanide, Total	100	ND	NA	NA	NA	NA	NA
Phenols	2000	30	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA	NA	NA
Extractable Petroleum Hydrocarbons (EPH)							
EPH (C9 - C28)		NA	NA	NA	NA	NA	NA
EPH (>C28 - C40)		NA	NA	NA	NA	NA	NA
Total EPH (C9 - C40)		NA	NA	NA	NA	NA	NA
Chloride (mg/L)	25000	1600	NA	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	1600	NA	NA	NA	NA	NA

*= Samples collected from different depths along screened interval (sample "A" = upper 5 feet of screened interval; sample "B" = bottom 5 feet of screened interval)
J = Indicates the concentration was reported below the RL but above the MDL
B = Indicates the analyte was found in the blank and in the sample
b = Interim Generic Ground Water Quality Criteria
NA = Sample not analyzed for this analyte
ND = Not detected

4C.

EXPERIMENTAL RESULTS SUMMARY

[illegible]

Sample Number	MW-23S	MW-23S	MW-23S	MW-23S	MW
Laboratory Sample Number	P1717-033	N39474-16	N67695-25	N99741-17	J435
Date Collected	03/04/2002	05/19/2003	05/19/2004	05/19/2005	10/10
GC/MS Volatile Organics (ppb)	GWQS				
Acetone	6000	ND	ND	ND	N
2-Butanone (MEK)	300	ND	ND	ND	N
Bromodichloromethane	1	ND	ND	ND	N
Chloroform	70	ND	ND	ND	N
Chloromethane	NS	ND	ND	ND	N
Methylene chloride	3	ND	ND	ND	N
Tetrachloroethylene	1	ND	ND	ND	N
Trichloroethylene	1	ND	ND	ND	N
1,1-Dichloroethylene	1	ND	86	ND	N
cis-1,2-Dichloroethylene	70	ND	ND	ND	N
trans-1,2-Dichloroethylene	100	ND	ND	ND	N
Vinyl chloride	1	ND	ND	ND	N
1,1,1-Trichloroethane	30	ND	ND	ND	N
1,1-Dichloroethane	50	ND	ND	ND	0.
1,2-Dichloroethane	2	ND	ND	ND	N
Chloroethane	5 a	ND	ND	ND	43.8
Isopropylbenzene	800	ND	ND	ND	N
Chlorobenzene	50	21	ND	ND	1.1
1,2-Dichlorobenzene	600	ND	ND	ND	N
1,4-Dichlorobenzene	75	ND	ND	ND	N
1,2-Dichloropropane	1	ND	ND	ND	N
Benzene	1	15	ND	8.3	3.6
Toluene	600	75000	7420	3780	48
Ethylbenzene	700	8900	2520	2290	26.9
Xylenes (total)	1000	63000	19700	11200	212
TOTAL TARGETED GC/MS Volatiles		146936	29726	17278.3	335.4
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	330	293.3
GC/MS Semi-volatile Organics (ppb)					
4-Chloroaniline	30	ND	5.2	ND	ND
bis(2-Chloroethyl)ether	7	18	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND
Butylbenzylphthalate	100	0.3	J	ND	ND
Di-n-butyl phthalate	700	ND	ND	ND	ND
Diethyl phthalate	6000	1.1	B	2	J
Dimethyl phthalate	100 a	ND	ND	ND	ND
bis(2-Ethylexy)phthalate	3	2.9	ND	ND	7.1
Isophorone	40	ND	ND	10.9	ND
Naphthalene	300	1.5	0.97	J	1.1
Phenanthrene	100 b	0.3	J	ND	ND
N-Nitrosodiphenylamine	10	ND	ND	ND	ND
2,4-Dimethylphenol	100	230	ND	ND	ND
TOTAL TARGETED GC/MS Semi-volatiles		253	6.17	14	7.1
TOTAL NON-TARGETED GC/MS Semi-volatiles		2869	4373	J	4403
PCBs (ppb)	0.5	ND	NA	NA	NA
Metals Analysis (ppb)					
Antimony	6	ND	ND	NA	NA
Arsenic	3	ND	ND	NA	NA
Cadmium	4	ND	ND	NA	NA
Chromium	70	15.5	ND	NA	NA
Copper	1300	14.9	B	ND	NA
Lead	5	6.4	ND	NA	NA
Mercury	2	ND	ND	NA	NA
Nickel	100	10.5	B	ND	NA
Thallium	2	ND	ND	NA	NA
Selenium	40	ND	ND	NA	NA
Zinc	2000	32.6	ND	NA	NA
General Chemistry (ppb)					
Cyanide, Total	100	ND	NA	NA	NA
Phenols	2000	1400	NA	ND	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA
Extractable Petroleum Hydrocarbons (EPH)					
EPH (C9 - C28)		NA	NA	NA	NA
EPH (>C28 - C40)		NA	NA	NA	NA
Total EPH (C9 - C40)		NA	NA	NA	NA
Chloride (mg/L)	25000	150	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	970	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
 B = Indicates the analyte was found in the blank and in the sample
 b = Interim Generic Ground Water Quality Criteria
 NA = Sample not analyzed for this analyte
 ND = Not detected
 N = Presumptive evidence of a compound from the use of GC/MS library search.

d.)

c.

IR RESULTS SUMMARY

MW-23S J84520-33 02/29/2008	MW-23S JA14554-9 03/18/2009	MW-23S JA45362-14 04/28/2010	MW-23S JA74383-10 04/27/2011	MW-23S JB7777-8 05/31/2012	MW-23S 07590-011 08/06/2013	MW-23S 05128-007 06/05/2014	MW-23S 06541-014 07/24/2015
ND	ND	ND	3.9	J 13.1	J 8.27	7.18	10.4
ND	ND	ND	ND	ND	1.64	ND	1.17
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	0.4	J ND	ND	ND	ND	ND
ND	ND	14	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	3.79	ND	ND
ND	ND	ND	0.41	J ND	ND	ND	ND
ND	ND	9.2	ND	ND	19.8	0.717	J 28.5
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	31.5	ND	ND	10.8	0.543	J 6.75
ND	ND	ND	ND	ND	ND	ND	ND
ND	0.66	J 96.2	ND	1.6	J 28.8	2.4	89.6
ND	ND	ND	ND	ND	ND	ND	ND
ND	2.4	53.9	ND	6.2	2.44	1.01	8.57
ND	ND	ND	ND	ND	1.84	ND	ND
ND	0.27	J 1.6	ND	ND	3.67	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
1.7	0.36	J 2.7	ND	0.76	J 11.1	2.12	ND
127	1	65.1	ND	ND	6.55	0.366	J ND
65.9	3.7	83.2	ND	ND	73.6	1.7	1.23
380	7.8	535	ND	ND	11.8	2.12	ND
574.6	16.19	892.8	4.31	J 21.66	184.1	18.156	J 146
114.3	J 31	J 126.1	J ND	15	J 1140	582	J 56.3
ND	NA	ND	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
5.8	NA	4.8	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
ND	NA	ND	NA	NA	NA	NA	NA
5.8	NA	4.8	NA	NA	NA	NA	NA
1063.7	J NA	948	J NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
5.7	ND	ND	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
7.3	7.4	3.5	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	1,740	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	1740	1270	1130
NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number		MW-23D	MW-23D	MW-23D	MW-23D	MW-23D	MW-23D	MW-23D
Laboratory Sample Number		02715-004	JA74383-11	08515-006	JB7777-9	07590-12	05228-002	06541-015
Date Collected		03/24/2011	04/27/2011	08/31/2011	05/31/2012	08/06/2013	06/06/2014	07/24/2015
GC/MS Volatile Organics (ppb)	GWQS							
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	0.642 J	ND	ND	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	ND	ND	ND	44.6	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	1	ND	ND	ND	ND	ND	69	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	1.67	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND
Toluene	600	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	1000	ND	ND	ND	ND	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		0.642 J	ND	ND	ND	ND	115.27	ND
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	ND	ND	ND	ND	ND
GC/MS Semi-volatile Organics (ppb)								
bis(2-Chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	700	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	6000	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	100 a	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylexyl)phthalate	3	NA	NA	NA	NA	NA	NA	NA
Isophorone	40	NA	NA	NA	NA	NA	NA	NA
Naphthalene	300	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	10	NA	NA	NA	NA	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA	NA
PCBs (ppb)	0.5	NA	NA	NA	NA	NA	NA	NA
Metals Analysis (ppb)								
Antimony	6	NA	NA	NA	NA	NA	NA	NA
Arsenic	3	NA	NA	NA	NA	NA	NA	NA
Cadmium	4	NA	NA	NA	NA	NA	NA	NA
Chromium	70	NA	NA	NA	NA	NA	NA	NA
Copper	1300	NA	NA	NA	NA	NA	NA	NA
Lead	5	NA	NA	NA	NA	NA	NA	NA
Mercury	2	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA
Thallium	2	NA	NA	NA	NA	NA	NA	NA
Selenium	40	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA
General Chemistry (ppb)								
Cyanide, Total	100	NA	NA	NA	NA	NA	NA	NA
Phenols	2000	NA	NA	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA	NA	195	ND
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
 NA = Sample not analyzed for this analyte
 ND = Not detected

TABLE
ARSY
COMPREHENSIVE GROUND

Sample Number	MW-24S	MW-24S	MW-24S	MW-24S	MW-
Laboratory Sample Number	P1717-034	N39474-17	N67695-26	N99350-23	J4354
Date Collected	03/04/2002	05/19/2003	05/19/2004	05/18/2005	10/11/
GC/MS Volatile Organics (ppb)		GWQS			
Bromodichloromethane	1	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND
Trichloroethylene	1	5.9	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND
Vinyl chloride	1	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND
Isopropylbenzene	700	NA	NA	NA	NA
Benzene	1	33	ND	ND	ND
Toluene	600	7600	4740	3960	3680
Ethylbenzene	700	19000	17800	17500	15800
Xylenes (total)	1000	110000	107000	80600	123000
TOTAL TARGETED GC/MS Volatiles		136638.9	129540	102060	142480
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	1200	720
GC/MS Semi-volatile Organics (ppb)					
Acenaphthene	400	ND	NA	NA	NA
bis(2-Chloroethyl)ether	7	ND	NA	NA	NA
1,2-Dichlorobenzene	600	ND	NA	NA	NA
1,4-Dichlorobenzene	75	ND	NA	NA	NA
Di-n-butyl phthalate	700	ND	NA	NA	NA
Diethyl phthalate	6000	7.4	NA	NA	NA
Dimethyl phthalate	100 a	ND	NA	NA	NA
bis(2-Ethylexyl)phthalate	3	4.8	NA	NA	NA
Isophorone	40	ND	NA	NA	NA
Naphthalene	300	ND	NA	NA	NA
Phenanthrene	100 b	1	NA	NA	NA
N-Nitrosodiphenylamine	10	ND	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		5.8	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		5634	NA	NA	NA
PCBs (ppb)		0.5			
		ND	NA	NA	NA
Metals Analysis (ppb)					
Antimony	6	ND	5.4	NA	NA
Arsenic	3	9.4	14	11.2	5.8
Cadmium	4	ND	ND	NA	NA
Chromium	70	7	19	NA	NA
Copper	1300	5.6	ND	NA	NA
Lead	5	7.5	8.2	NA	NA
Mercury	2	ND	ND	NA	NA
Nickel	100	ND	ND	NA	NA
Thallium	2	ND	ND	NA	NA
Selenium	40	7.1	ND	NA	NA
Zinc	2000	34.3	ND	NA	NA
General Chemistry (ppb)					
Cyanide, Total	100	NA	NA	NA	NA
Phenols	2000	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA
Extractable Petroleum Hydrocarbons (EPH)					
EPH (C9 - C28)		NA	NA	NA	NA
EPH (>C28 - C40)		NA	NA	NA	NA
Total EPH (C9 - C40)		NA	NA	NA	NA
Chloride (mg/L)	250000	96	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	590	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
 B = Indicates the analyte was found in the blank and in the sample
 b = Interim Generic Ground Water Quality Criteria
 NA = Sample not analyzed for this analyte
 ND = Not detected
 D = The compound was reported from the Diluted analysis
 N = Presumptive evidence of a compound from the use of GC/MS library search.

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[illegible]

TABLE
ARSY
COMPREHENSIVE GROUND

Sample Number		MW-27S	MW-27S	MW-27S	MW-27S
Laboratory Sample Number		N39474-18	N67695-30	N99741-18	J43546-38
Date Collected		05/19/2003	05/19/2004	05/19/2005	10/11/2006
GC/MS Volatile Organics (ppb)		GWQS			
Acetone	6000	NA	NA	NA	NA
2-Butanone (MEK)	300	NA	NA	NA	NA
Bromodichloromethane	1	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND
Trichloroethylene	1	0.64	J 2.2	3.5	4.2
1,1-Dichloroethylene	1	ND	2.1	ND	0.79
cis-1,2-Dichloroethylene	70	67.8	141	168	165
trans-1,2-Dichloroethylene	100	ND	1.1	2.2	2.8
Vinyl chloride	1	4.1	4.3	3.1	3.5
1,1,1-Trichloroethane	30	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND
Chlorobenzene	50	64.1	171	203	151
1,2-Dichlorobenzene	600	ND	ND	ND	0.22
1,4-Dichlorobenzene	75	ND	ND	ND	0.35
1,2-Dichloropropane	1	ND	ND	ND	ND
Methyl Tert Butyl Ether (MTBE)	70	NA	NA	NA	NA
Benzene	1	4	5.1	3.6	2.6
Toluene	600	ND	0.41	J 0.52	J 0.52
Ethylbenzene	700	ND	ND	ND	ND
Xylenes (total)	1000	ND	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		140.64	J 327.21	J 383.92	J 330.98
TOTAL NON-TARGETED GC/MS Volatiles		ND	7.2	J 9.9	J ND
GC/MS Semi-volatile Organics (ppb)					
Acenaphthene	400	NA	NA	NA	ND
bis(2-Chloroethyl)ether	7	NA	NA	NA	ND
1,2-Dichlorobenzene	600	NA	NA	NA	ND
1,4-Dichlorobenzene	75	NA	NA	NA	ND
Di-n-butyl phthalate	700	NA	NA	NA	ND
Diethyl phthalate	6000	NA	NA	NA	ND
Dimethyl phthalate	100 a	NA	NA	NA	ND
bis(2-Ethylhexyl)phthalate	3	NA	NA	NA	1.3
Fluorene	300	NA	NA	NA	ND
Isophorone	40	NA	NA	NA	ND
Naphthalene	300	NA	NA	NA	ND
N-Nitrosodiphenylamine	10	NA	NA	NA	ND
Phenanthrene	100 b	NA	NA	NA	ND
Benzo(a)anthracene	0.1	NA	NA	NA	ND
Fluoranthene	300	NA	NA	NA	ND
Pyrene	200	NA	NA	NA	ND
cis-1,2-Dichloroethylene	70	NA	NA	NA	ND
TOTAL TARGETED GC/MS Semi-volatiles		NA	NA	NA	1.3
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA	NA	NA	ND
PCBs (ppb)		0.5	NA	NA	NA
Metals Analysis (ppb)					
Antimony	6	ND	ND	ND	NA
Arsenic	3	44.8	14.9	70.9	41.6
Cadmium	4	ND	ND	ND	NA
Chromium	70	ND	ND	ND	NA
Copper	1300	ND	ND	ND	NA
Lead	5	4.4	ND	ND	NA
Mercury	2	ND	ND	ND	NA
Nickel	100	ND	ND	ND	NA
Thallium	2	ND	ND	ND	NA
Selenium	40	5.2	ND	ND	NA
Zinc	2000	36	74.3	ND	NA
General Chemistry (ppb)					
Cyanide, Total	100	NA	NA	NA	NA
Phenols	2000	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL.
b = Interim Generic Ground Water Quality Criteria
NA = Sample not analyzed for this analyte
ND = Not detected

4C.

EXPERIMENTAL RESULTS SUMMARY

[illegible]

TABL
ARSY
COMPREHENSIVE GROUND

Sample Number		MW-29S	MW-29S	MW-29S	MW-29
Laboratory Sample Number		N39474-21	N67695-33	N99471-20	J43546-
Date Collected		05/19/2003	05/20/2004	05/19/2005	10/10/200
GC/MS Volatile Organics (ppb)		GWQS			
Acetone	6000	NA	NA	NA	NA
2-Butanone (MEK)	300	NA	NA	NA	NA
1,1,1-Trichloroethane	30	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND
Chlorobenzene	50	13.3	6.1	6.1	0.91
1,2-Dichlorobenzene	600	10.5	3.7	1.9	0.45
1,3-Dichlorobenzene	600	2.4	1.6	0.9	J
1,4-Dichlorobenzene	75	1.8	1.1	0.78	J
1,2-Dichloropropane	1	ND	ND	ND	ND
Cyclohexane	NS	ND	ND	ND	ND
Styrene	NS	NA	NA	NA	NA
Carbon disulfide	700	NA	NA	NA	NA
Methylcyclohexane	NS	NA	NA	NA	NA
Benzene	1	3	2.4	2.5	ND
Toluene	600	128	14.4	15.7	0.29
Ethylbenzene	700	20	5.9	3.3	0.47
Xylenes (total)	1000	23.5	9.8	7	1.6
TOTAL TARGETED GC/MS Volatiles		202.5	45	38.18	4.13
TOTAL NON-TARGETED GC/MS Volatiles		160.3	J	141.2	J
GC/MS Semi-volatile Organics (ppb)					
Acenaphthene	400	1.5	J	2.3	1.5
Anthracene	2000			0.75	ND
Benzo(a)anthracene	0.1	0.58	J	0.89	J
Benzo(a)pyrene	0.1	ND		0.83	ND
Benzo(b)fluoranthene	0.2	ND		1.2	ND
Benzo(g,h,i)perylene	100 a	ND		0.59	ND
1,2,4-Trichlorobenzene	9	3.1		ND	ND
1,2-Dichlorobenzene	600	17.2		2.4	2.7
1,3-Dichlorobenzene	600	3.9		1.2	J
1,4-Dichlorobenzene	75	2.5		0.69	J
bis(2-Ethylexyl)phthalate	3	5.3		9.2	2.1
Fluoranthene	300	1.5	J	3.1	0.81
Fluorene	300	0.75	J	1.9	J
Naphthalene	300	11.6		8.4	8.7
N-Nitrosodiphenylamine	10	10.6		6.1	6.1
Phenanthrene	100 b	1.6	J	2.1	J
Phenol	2000	ND		19.1	7.1
Pyrene	200	1.2	J	2.6	J
TOTAL TARGETED GC/MS Semi-volatiles		61.33	J	63.35	37.28
TOTAL NON-TARGETED GC/MS Semi-volatiles		1293	J	1546	J
Pesticides (ppb)					
		NA	NA	ND	ND
PCBs (ppb)					
Aroclor 1254	0.5	ND	ND	32.1	ND
Aroclor 1242	0.5	ND	ND	441	ND
Aroclor 1248	0.5	657	152	ND	ND
Metals Analysis (ppb)					
Antimony	6	ND	ND	26.6	ND
Arsenic	3	81.4	12.6	62.7	ND
Beryllium	1	ND	ND	12.4	ND
Cadmium	4	9.3	ND	17.1	ND
Chromium	70	3390	104	805	ND
Copper	1300	881	47.8	353	ND
Lead	5	300	11.4	91.6	ND
Mercury	2	81.3	1.9	15.8	ND
Nickel	100	318	ND	202	ND
Thallium	2	ND	ND	ND	ND
Selenium	40	5.1	ND	7.2	ND
Zinc	2000	5450	176	1950	20.8
General Chemistry (ppb)					
Cyanide, Total	100	NA	ND	ND	NA
Phenols	2000	NA	ND	ND	NA
Petroleum Hydrocarbons	NN	NA	76700	54800	1400
Extractable Petroleum Hydrocarbons (EPH)					
EPH (C9 - C28)		NA	NA	NA	NA
EPH (>C28 - C40)		NA	NA	NA	NA
Total EPH (C9 - C40)		NA	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
b = Interim Generic Ground Water Quality Criteria
NA = Sample not analyzed for this analyte
ND = Not detected
D = The compound was reported from the Diluted analysis
N = Presumptive evidence of a compound from the use of GC/MS library search.

2.2. RESULTS SUMMARY

D

TABLE
ARSY
COMPREHENSIVE GROUND

Sample Number	MW-29D	MW-29D	MW-29D	MW-29
Laboratory Sample Number	N39474-22	N67695-34	N99471-21	J43546-
Date Collected	05/19/2003	05/20/2004	05/19/2005	10/10/200
GC/MS Volatile Organics (ppb)		GWQS		
Bromodichloromethane	1	ND	ND	ND
Chloroform	70	ND	ND	ND
Chloromethane	NS	ND	ND	ND
Methylene chloride	3	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND
Trichloroethylene	1	1.3	0.77	J 0.97
1,1-Dichloroethylene	1	ND	ND	ND
cis-1,2-Dichloroethylene	70	3.6	3.1	4
trans-1,2-Dichloroethylene	100	ND	0.43	J 0.9
Vinyl chloride	1	203	180	174 3.3
1,1,1-Trichloroethane	30	ND	ND	ND
1,1-Dichloroethane	50	0.87	J 0.98	J 1
1,2-Dichloroethane	2	ND	ND	7.8
1,4-Dioxane	0.4 a	NA	NA	NA
Chloroethane	5 a	ND	ND	ND
Chlorobenzene	50	166	193	254 54.2
1,2-Dichlorobenzene	600	55.8	56.1	81.6 28.9
1,3-Dichlorobenzene	600	11.4	12.9	22.8 9.2
1,4-Dichlorobenzene	75	72.9	72.3	113 42.8
1,2-Dichloropropane	1	ND	ND	ND
Benzene	1	97.1	109	111 3.9
Toluene	600	8.9	7.5	8.7 1
Ethylbenzene	700	33.8	33.8	45.4 3.2
Xylenes (total)	1000	2.5	2.4	3 0.94
TOTAL TARGETED GC/MS Volatiles		657.17	672.28	828.17 147.44
TOTAL NON-TARGETED GC/MS Volatiles		6.9	J 107.2	J 151.8 J
GC/MS Semi-volatile Organics (ppb)				
Acetophenone	700	ND	ND	ND
Acenaphthene	400	ND	ND	ND
Benzo(a)anthracene	0.1	ND	ND	ND
4-Chloroaniline	30	4.4	J 3	J ND
bis(2-Chloroethyl)ether	7	ND	ND	ND
1,2,4-Trichlorobenzene	9	1.1	J 0.67	J 0.74
1,2-Dichlorobenzene	600	42.4	35.3	58.1
1,3-Dichlorobenzene	600	9	8.2	16.6
1,4-Dichlorobenzene	75	53.7	43.7	78.8
Di-n-butyl phthalate	700	ND	ND	ND
Diethyl phthalate	6000	ND	ND	ND
Dimethyl phthalate	100 a	ND	ND	ND
bis(2-Ethylethyl)phthalate	3	ND	1.4	J ND 1.5
Fluoranthene	300	ND	ND	ND
Fluorene	300	ND	ND	ND
Isophorone	40	ND	ND	ND
Naphthalene	300	ND	ND	ND
N-Nitrosodiphenylamine	10	ND	1.4	J ND
Phenanthrene	100 b	ND	ND	ND
Phenol	2000	ND	3.8	ND
Pyrene	200	ND	ND	ND
TOTAL TARGETED GC/MS Semi-volatiles		110.6	97.47	154.24 1.5
TOTAL NON-TARGETED GC/MS Semi-volatiles		213.5	J 753.4	J 156.8 J
PCBs (ppb)				
Aroclor 1248	0.5	NA	ND	ND NA
Metals Analysis (ppb)				
Antimony	6	ND	ND	NA
Arsenic	3	ND	ND	NA
Cadmium	4	ND	ND	NA
Chromium	70	ND	ND	NA
Copper	1300	30.8	ND	NA
Lead	5	ND	ND	NA
Mercury	2	ND	ND	NA
Nickel	100	ND	ND	NA
Thallium	2	ND	ND	NA
Selenium	40	ND	ND	NA
Zinc	2000	39.5	46.7	NA
General Chemistry (ppb)				
Cyanide, Total	100	NA	ND	NA
Phenols	2000	NA	ND	NA
Petroleum Hydrocarbons	NN	ND	ND	NA
Chloride (mg/L)	250000	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
b = Interim Generic Ground Water Quality Criteria
NA = Sample not analyzed for this analyte
ND = Not detected

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VC.

IR RESULTS SUMMARY

MW-29D	MW-29D	MW-29D	MW-29D	MW-29D	MW-29D	MW-29D	MW-29D
184520-40	AJ14554-12	JA45362-18	JA74163-15	JB7777-17	07695-009	05109-016	06447-008
2/29/2008	03/18/2009	04/28/2010	04/25/2011	05/31/2012	08/08/2013	06/04/2014	07/23/2015
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND	ND	ND
1.6	J 1.8	J	ND	ND	ND	1.79	J ND
1.1	J 1.1	J	ND	ND	ND	1.42	J ND
59.8	66.4	45.6	ND	21.1	15	14.8	ND
ND	ND	ND	ND	ND	ND	ND	ND
0.52	J ND	ND	ND	ND	ND	ND	ND
ND	114	ND	ND	ND	ND	ND	ND
NA	NA	NA	ND	ND	ND	269	J ND
2.6	ND	ND	ND	ND	ND	ND	ND
593	1040	788	15.9	1890	1890	1360	13.6
81.4	ND	79	1.2	147	140	95.3	1.45
34.3	44.9	33.8	0.61	J 79.3	71.6	49.3	0.765
154	193	179	2.5	337	336	250	3.31
ND	ND	ND	ND	ND	ND	ND	ND
71.4	109	71.9	1.3	117	80.2	43	0.669
4.9	5.9	3.1	J ND	5	2.97	J 2.2	ND
35	30	16.1	ND	ND	ND	1.27	J ND
ND	1.2	ND	ND	ND	ND	ND	ND
1036.4	1607.3	1216.5	21.51	2596.4	2535.77	J 2090	J 19.8
ND	34	J ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	1.3	J NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
4.1	J 3.6	J ND	ND	4.7	J NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
66.2	60.3	54.9	ND	ND	NA	ND	NA
28.2	23.6	22.7	ND	ND	NA	ND	NA
130	118	118	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	2.48	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
ND	ND	ND	ND	ND	NA	ND	NA
224.4	207.98	195.6	ND	4.7	NA	ND	NA
152.8	J 86.2	J 188.8	J ND	143.3	J NA	495	NA
NA	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
8.3	12.5	12.9	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
ND	NA	NA	NA	NA	NA	NA	NA
42.1	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA

TABLE
ARSYI
COMPREHENSIVE GROUND

Sample Number	MW-31S	MW-31S	MW-31S	MW-31S
Laboratory Sample Number	N39574-22	N67695-37	N99350-21	J43546-44
Date Collected	05/19/2003	05/20/2004	05/18/2005	10/10/2006
GC/MS Volatile Organics (ppb)	GWQS			
Acetone	6000	ND	ND	ND
Methyl tert-butyl ether (MTBE)	70	NA	NA	NA
Bromodichloromethane	1	ND	ND	ND
Chloroform	70	ND	ND	ND
Chloromethane	NS	ND	ND	ND
Methylene chloride	3	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND
Trichloroethylene	1	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	0.73 J
trans-1,2-Dichloroethylene	100	ND	ND	ND
Vinyl chloride	1	ND	ND	ND
Carbon disulfide	700	ND	ND	ND
2-Butanone (MEK)	300			
1,1,1-Trichloroethane	30	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND
Chlorobenzene	50	6.2	4.7	3.4
Isopropylbenzene	700	ND	ND	ND
1,2-Dichlorobenzene	600	ND	0.64 J	0.84 J
1,3-Dichlorobenzene	600	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	NS			
Benzene	1	10.1	7.7	7.7
Toluene	600	7.5	1.5 J	3.2
Ethylbenzene	700	31.9	11.1	9.4
Xylenes (total)	1000	89.9	16.5	20.7
TOTAL TARGETED GC/MS Volatiles		145.6	42.14	46.77
TOTAL NON-TARGETED GC/MS Volatiles		ND	30 J	28.4 J
GC/MS Semi-volatile Organics (ppb)				
Acenaphthene	400	0.52	0.58 J	ND
bis(2-Chloroethyl)ether	7	ND	ND	ND
1,2-Dichlorobenzene	600	1.3	1.3 J	1 J
1,4-Dichlorobenzene	75	0.52	0.51 J	ND
Di-n-butyl phthalate	700	ND	ND	ND
Diethyl phthalate	6000	ND	ND	ND
2,4-Dimethylphenol	100	ND	11.7	ND
Dimethyl phthalate	100 a	ND	ND	ND
bis(2-Ethylethyl)phthalate	3	ND	ND	5.9
Fluorene	300	ND	ND	ND
Isophorone	40	ND	ND	ND
Naphthalene	300	4.7	4.6	2.7
N-Nitrosodiphenylamine	10	ND	ND	ND
Phenanthrene	100 b	0.86 J	0.93 J	ND
Phenol	2000	ND	88.5	ND
Fluoranthene	300	ND	ND	ND
Pyrene	200	ND	ND	ND
TOTAL TARGETED GC/MS Semi-volatiles		7.9	108.12	3.7
TOTAL NON-TARGETED GC/MS Semi-volatiles		446.6	888.1	824 J
PCBs (ppb)	0.5	ND	ND	NA
Metals Analysis (ppb)				
Antimony	6	ND	ND	NA
Arsenic	3	39.3	23.1	28.8
Cadmium	4	ND	ND	NA
Chromium	70	75.1	37.7	NA
Copper	1300	203	ND	NA
Lead	5	67.8	9.6	NA
Mercury	2	1	ND	NA
Nickel	100	ND	ND	NA
Thallium	2	ND	ND	NA
Selenium	40	ND	5.6	NA
Zinc	2000	117	20.8	NA
General Chemistry (ppb)				
Cyanide, Total	100	NA	ND	NA
Phenols	2000	NA	ND	NA
Petroleum Hydrocarbons	NN	NA	ND	NA
Chloride (mg/L)	250000	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
b = Interim Generic Ground Water Quality Criteria
NA = Sample not analyzed for this analyte

IC.

RESULTS SUMMARY

[illegible]

TABLE
ARSY/
COMPREHENSIVE GROUND

Sample Number	MW-33S	MW-33S	MW-33S
Laboratory Sample Number	N67695-40	N99471-22	J43546-47
Date Collected	05/20/2004	05/19/2005	10/11/2006
GC/MS Volatile Organics (ppb)	GWQS		
Acetone	6000	NA	NA
2-Butanone (MEK)	300	NA	NA
4-Methyl-2-pentanone (MIBK)	NS	NA	NA
Chloromethane	NS	ND	ND
Bromodichloromethane	1	ND	ND
Chloroform	70	14400	14300
Carbon disulfide	700	NA	NA
Carbon Tetrachloride	1	11400	11000
Methyl Acetate	7000	NA	NA
Methylene chloride	3	15900	15500
Tetrachloroethylene	1	ND	ND
Trichloroethylene	1	ND	ND
1,1-Dichloroethylene	1	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND
Vinyl chloride	1	ND	ND
1,1,1-Trichloroethane	30	ND	ND
1,1-Dichloroethane	50	ND	ND
1,2-Dichloroethane	2	ND	ND
2-Hexanone	300 a	NA	NA
Chlorobenzene	50	ND	ND
1,2-Dichlorobenzene	600	ND	ND
1,4-Dichlorobenzene	75	ND	206 J
1,2-Dichloropropane	1	ND	ND
Methylcyclohexane	NS	NA	NA
Isopropylbenzene	700	NA	NA
Benzene	1	11400	11500
Toluene	600	87800	88600
Ethylbenzene	700	239 J	280 J
Xylenes (total)	1000	4190	4230
TOTAL TARGETED GC/MS Volatiles		145329	145616
TOTAL NON-TARGETED GC/MS Volatiles		28500 J	24300 J
GC/MS Semi-volatile Organics (ppb)			
Acetophenone	700	NA	NA
Acenaphthene	400	ND	ND
2-Methylnaphthalene	30	NA	NA
2,4-Dimethylphenol	100	ND	383
bis(2-Chloroethyl)ether	7	ND	ND
1,2-Dichlorobenzene	600	ND	ND
1,3-Dichlorobenzene	600	ND	8
1,4-Dichlorobenzene	75	11.8	24.1
Di-n-butyl phthalate	700	1240	1530
Di-n-octyl phthalate	NS	ND	ND
Diethyl phthalate	6000	791	552
Dimethyl phthalate	100 a	486	318
bis(2-Ethylhexyl)phthalate	3	ND	ND
Fluorene	300	ND	ND
Isophorone	40	ND	ND
Naphthalene	300	217	258
N-Nitrosodiphenylamine	10	ND	ND
Phenol	2000	2850	1800
Phenanthrene	100 b	ND	ND
TOTAL TARGETED GC/MS Semi-volatiles		5595.8	4865.1
TOTAL NON-TARGETED GC/MS Semi-volatiles		11210 J	32880 J
Pesticides (ppb)		NA	ND
PCBs (ppb)			
Aroclor 1260	0.5	ND	1.1
Metals Analysis (ppb)			
Antimony	6	1620	1060
Arsenic	3	54.6	69.1
Beryllium	1	ND	13.9
Cadmium	4	6650	4710
Chromium	1300	185	140
Copper	1300	3320	2830
Lead	5	20100	17300
Mercury	2	ND	ND
Nickel	100	197	136
Thallium	2	ND	ND
Silver	40	ND	ND
Selenium	40	49.4	54
Zinc	2000	407000	298000
General Chemistry (ppb)			
Cyanide, Total	100	640	160
Phenols	2000	14700	14100
Petroleum Hydrocarbons	NN	7800	26800
Extractable Petroleum Hydrocarbons (EPH)			
EPH (C9 - C28)		NA	NA
EPH (>C28 - C40)		NA	NA
Total EPH (C9 - C40)		NA	NA
Chloride (mg/L)	250000	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA

* = TCL VO sampled 6/1/2012

J = Indicates the concentration was reported below the RL but above the MDL

a = Interim Specific Ground Water Quality Criteria

b = Interim Generic Ground Water Quality Criteria

NA = Sample not analyzed for this analyte

ND = Not detected

D = The compound was reported from the Diluted analysis

1.)
2.)
3. RESULTS SUMMARY

13S	MW-33S	MW-33S	MW-33S	MW-33S	MW-33S	MW-33S	MW-33S
1-46	JA14554-13	JA45362-19	JA74163-19	JB7777-4	* 07633-010	05128-003	06447-006
008	03/18/2009	04/28/2010	04/25/2011	05/31/2012	08/07/2013	06/05/2014	07/23/2015
	NA	NA	356	ND	2850	ND	ND
	NA	NA	104	ND	ND	ND	ND
	NA	NA	70	ND	464	ND	ND
	ND	ND	ND	ND	ND	ND	ND
	ND	ND	ND	ND	ND	ND	ND
	2700	213	252	0.22	3040	271	1060
	NA	NA	21.3	ND	ND	ND	ND
	3830	326	313	ND	931	ND	ND
	NA	NA	10.1	ND	ND	ND	ND
	4250	321	662	ND	6530	879	6350
	35.5	ND	6.6	ND	ND	ND	ND
	19.5	ND	3.6	ND	ND	ND	ND
	50.9	ND	ND	0.62	ND	ND	ND
	ND	ND	4.8	21.2	ND	ND	ND
	ND	ND	ND	0.63	ND	ND	ND
	ND	ND	180	ND	ND	ND	ND
	ND	ND	ND	ND	ND	ND	ND
	ND	ND	9.2	ND	ND	ND	ND
	ND	ND	ND	ND	24.9	ND	ND
	NA	NA	371	ND	2290	308	1620
	ND	ND	ND	0.28	ND	ND	ND
	ND	ND	ND	ND	ND	ND	ND
	ND	ND	5.6	ND	ND	ND	ND
	ND	ND	ND	ND	ND	ND	ND
	NA	NA	10.2	ND	ND	ND	ND
	NA	NA	8.7	ND	ND	ND	ND
	5250	614	778	0.84	5390	841	6250
	43800	5160	7570	11.9	60000	9580	58500
	197	28.7	45.4	0.52	208	38.3	296
	3470	451	780	3.4	3440	666	3880
9	63602.9	7113.7	11381.5	219.61	85143	12600	78000
	750	ND	999	17	2850	325	ND
	NA	NA	9.7	NA	NA	NA	NA
	ND	NA	ND	NA	NA	NA	NA
	NA	NA	1.4	NA	NA	NA	NA
	ND	ND	ND	NA	NA	NA	NA
	ND	ND	ND	NA	NA	NA	NA
	ND	ND	ND	NA	NA	NA	NA
	9.9	9.3	ND	NA	NA	NA	NA
	143	74.8	ND	NA	NA	NA	NA
	8.3	ND	ND	NA	NA	NA	NA
	242	171	31.6	NA	NA	NA	NA
	52.6	34.7	5.7	NA	NA	NA	NA
	ND	ND	2.9	NA	NA	NA	NA
	ND	ND	ND	NA	NA	NA	NA
	ND	ND	ND	NA	NA	NA	NA
	121	116	42.7	NA	NA	NA	NA
	ND	ND	ND	NA	NA	NA	NA
	ND	ND	ND	NA	NA	NA	NA
	ND	ND	ND	NA	NA	NA	NA
	576.8	405.8	94	NA	NA	NA	NA
	5620	5707	1909	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA
	224	103	261	241	230	480	119
	16.9	15.4	31.2	11.4	13.3	NA	NA
	ND	ND	ND	ND	NA	NA	NA
	297	7.3	81.1	33.7	146	NA	NA
	14.6	40.6	ND	ND	NA	NA	NA
	327	53.7	ND	ND	NA	NA	NA
	1520	82.4	593	479	900	149	274
	0.46	ND	ND	ND	NA	NA	NA
	612	965	729	185	1550	772	476
	ND	ND	ND	ND	NA	NA	NA
	ND	ND	ND	ND	NA	NA	NA
	ND	ND	ND	ND	NA	NA	NA
	11100	2900	6260	27000	52100	2220	1560
	ND	0.01	NA	NA	NA	NA	NA
	3	2.3	NA	NA	NA	NA	NA
	21600	25700	NA	NA	NA	NA	NA
	NA	NA	5540	39.6	16000	NA	NA
	NA	NA	487	0.839	NA	NA	NA
	NA	NA	6030	40.4	16000	13100	13400
	NA	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA

Sample Number	MW-34S	MW-34S	MW-34S	J
Laboratory Sample Number	N67695-41	N99471-23	J43546-48	J
Date Collected	05/20/2004	05/19/2005	10/11/2006	02
GC/MS Volatile Organics (ppb)		GWQS		
Acetone	6000	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	NS	NA	NA	NA
2-Butanone (MEK)	300	NA	NA	NA
Bromodichloromethane	1	ND	ND	ND
Chloroform	70	ND	ND	ND
Carbon disulfide	700	NA	NA	NA
Carbon Tetrachloride	1	ND	ND	ND
Chloromethane	NS	ND	ND	ND
Methylene chloride	3	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND
Trichloroethylene	1	147 J	ND	1.2 J
1,1-Dichloroethylene	1	ND	86.4	12.6
cis-1,2-Dichloroethylene	70	41500	4610	981
trans-1,2-Dichloroethylene	100	324	12.9 J	3.7
Vinyl chloride	1	4610	12100	2010
1,1,1-Trichloroethane	30	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND
2-Hexanone	300 a	NA	NA	NA
Chlorobenzene	50	ND	ND	5.7
1,2-Dichlorobenzene	600	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND
Isopropylbenzene	700	ND	ND	ND
Benzene	1	128 J	42.1	8.9
Toluene	600	8260	1640	491
Ethylbenzene	700	97.5 J	76.6	14.3
Xylenes (total)	1000	1200	602	154
TOTAL TARGETED GC/MS Volatiles		56266.5	19170	3682.4
TOTAL NON-TARGETED GC/MS Volatiles		2000 J	1950 J	125 J
GC/MS Semi-volatile Organics (ppb)				
Acenaphthene	400	ND	ND	ND
2,4-Dimethylphenol	100	67.3	57	ND
bis(2-Chloroethyl)ether	7	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND
Di-n-butyl phthalate	700	365	12.1	62.1
4-Chloroaniline	30	ND	ND	ND
Diethyl phthalate	6000	3290	306	204
Dimethyl phthalate	100 a	ND	ND	ND
bis(2-Ethylethyl)phthalate	3	ND	ND	ND
Fluoranthene	300	3	ND	ND
Fluorene	300	1.5 J	ND	ND
Isophorone	40	33.9	ND	2.7
Naphthalene	300	9.9	7.5	3.4
N-Nitrosodiphenylamine	10	ND	ND	ND
Phenol	2000	315	207	ND
Phenanthrene	100 b	ND	ND	ND
TOTAL TARGETED GC/MS Semi-volatiles		4085.6	589.6	272.2
TOTAL NON-TARGETED GC/MS Semi-volatiles		9741 J	6122 J	2759 J
Pesticides (ppb)		NA		
PCBs (ppb)		0.5		
		ND	ND	NA
Metals Analysis (ppb)				
Antimony	6	ND	6.5	ND
Arsenic	3	15	20.1	15.5
Beryllium	1	ND	12.8	ND
Cadmium	4	ND	6.4	ND
Chromium	70	11	25	ND
Copper	1300	52.7	ND	32.6
Lead	5	25.8	44.2	10.9
Mercury	2	ND	ND	ND
Nickel	100	677	191	749
Thallium	2	ND	ND	ND
Selenium	40	ND	17.3	ND
Silver	40	ND	ND	ND
Zinc	2000	205	347	55.9
General Chemistry (ppb)				
Cyanide, Total	100	ND	ND	NA
Phenols	2000	2900	1600	NA
Petroleum Hydrocarbons	NN	13900	860	ND
Extractable Petroleum Hydrocarbons (EPH)				
EPH (C9 - C28)		NA	NA	NA
EPH (>C28 - C40)		NA	NA	NA
Total EPH (C9 - C40)		NA	NA	NA
Chloride (mg/L)	250000	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA

* = TCL VO sampled 6/1/2012

J = Indicates the concentration was reported below the RL but above the MDL

a = Interim Specific Ground Water Quality Criteria

b = Interim Generic Ground Water Quality Criteria

NA = Sample not analyzed for this analyte

ND = Not detected

D = The compound was reported from the Diluted analysis

N = Presumptive evidence of a compound from the use of GC/MS library search.

LTS SUMMARY

MW-34S JA14854-14 03/18/2009	MW-34S JA45362-20 04/28/2010	MW-34S JA74264-17 04/26/2011	MW-34S JB7777-5 05/31/2012	MW-34S 07633-011 08/07/2013	MW-34S 05128-006 06/05/2014	MW-34S 06443-008 07/22/2015	
NA	NA	ND	2190	130	11.1	27.8	D
NA	NA	ND	241	J 14.4	J ND	ND	
NA	NA	ND	ND	ND	ND	4.5	DJ
ND	ND	ND	ND	ND	ND	ND	
0.74	J 0.32	J ND	2820	ND	ND	ND	
NA	NA	ND	160	J ND	ND	ND	
ND	ND	ND	2280	ND	ND	ND	
ND	ND	ND	ND	ND	ND	ND	
4.3	ND	ND	5020	ND	ND	ND	
ND	ND	ND	30.2	J ND	ND	ND	
ND	ND	0.24	J ND	ND	ND	ND	
3.1	ND	ND	ND	ND	ND	48.7	D
188	2.3	77.2	30.1	J 716	4.35	1170	D
0.88	J ND	0.89	J ND	ND	ND	10.8	D
772	37.3	174	ND	3680	51.7	9010	D
ND	ND	ND	ND	ND	ND	ND	
ND	ND	0.68	J 49.5	J ND	ND	ND	
ND	ND	ND	ND	ND	ND	ND	
NA	NA	ND	1680	ND	ND	ND	
0.63	J ND	ND	ND	ND	0.839	J 11.1	D
ND	ND	ND	ND	ND	ND	ND	
ND	ND	ND	ND	ND	ND	ND	
ND	ND	ND	ND	ND	ND	ND	
2.3	ND	1.2	5590	14	J ND	14.5	D
7.7	ND	13.7	46600	658	3.53	959	D
1.8	ND	0.52	J 212	22.2	ND	29.2	D
3.2	ND	6.2	3720	233	3	366	D
984.65	39.92	274.63	70622.8	5496.4	J 74.519	11675.1	DJ
334.5	J 7.2	J 34	J 1410	J 830	8.8	367	DJN
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	2.8	NA	NA	NA	NA	NA	
NA	0.118	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	ND	NA	NA	NA	NA	NA	
NA	2.918	NA	NA	NA	NA	NA	
NA	594.2	J NA	NA	NA	NA	NA	
NA	NA	NA	NA	NA	NA	NA	
NA	NA	NA	NA	NA	NA	NA	
ND	ND	NA	NA	NA	NA	NA	
ND	ND	NA	NA	NA	NA	NA	
ND	ND	NA	NA	NA	NA	NA	
ND	ND	NA	NA	NA	NA	NA	
ND	ND	NA	NA	NA	NA	NA	
50	19.2	NA	NA	NA	NA	NA	
12.2	3.6	6.7	13.1	14.3	24.7	6.15	
ND	ND	NA	NA	NA	NA	NA	
317	319	366	613	711	93.6	501	
ND	ND	NA	NA	NA	NA	NA	
ND	ND	NA	NA	NA	NA	NA	
ND	ND	NA	NA	NA	NA	NA	
36.2	ND	NA	NA	NA	NA	NA	
ND	NA	NA	NA	NA	NA	NA	
ND	NA	NA	NA	NA	NA	NA	
2010	696	NA	NA	NA	NA	NA	
NA	NA	613	1380	2640	NA	NA	
NA	NA	158	290	NA	NA	NA	
NA	NA	771	1670	2640	525	2430	
NA	NA	NA	NA	NA	NA	NA	
NA	NA	NA	NA	NA	NA	NA	

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number	MW-34D	MW-34D	MW-34D	MW-34D	MW-34D	MW-34D	MW-34D
Laboratory Sample Number	02619-004	JA74264-18	08498-003	JB7777-6	07633-003	05128-015	06447-001
Date Collected	03/22/2011	04/26/2011	08/30/2011	05/31/2012	08/07/2013	06/05/2014	07/23/2015
<i>GC/MS Volatile Organics (ppb)</i>	GWQS						
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	0.646	J	ND
Trichloroethylene	1	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	19.5	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND
Vinyl chloride	1	6.17	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND
Toluene	600	5.9	ND	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND
Xylenes (total)	1000	ND	ND	ND	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		31.6	ND	ND	ND	0.646	J
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	ND	ND	8	ND
<i>GC/MS Semi-volatile Organics (ppb)</i>							
bis(2-Chloroethyl)ether	7	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	700	NA	NA	NA	NA	NA	NA
Diethyl phthalate	6000	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	100 a	NA	NA	NA	NA	NA	NA
bis(2-Ethylexyl)phthalate	3	NA	NA	NA	NA	NA	NA
Isophorone	40	NA	NA	NA	NA	NA	NA
Naphthalene	300	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	10	NA	NA	NA	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA
<i>PCBs (ppb)</i>	0.5	NA	NA	NA	NA	NA	NA
<i>Metals Analysis (ppb)</i>							
Antimony	6	NA	NA	NA	NA	NA	NA
Arsenic	3	NA	NA	NA	NA	NA	NA
Cadmium	4	NA	NA	NA	NA	NA	NA
Chromium	70	NA	NA	NA	NA	NA	NA
Copper	1300	NA	NA	NA	NA	NA	NA
Lead	5	NA	ND	NA	NA	NA	NA
Mercury	2	NA	NA	NA	NA	NA	NA
Nickel	100	NA	ND	NA	NA	NA	NA
Thallium	2	NA	NA	NA	NA	NA	NA
Selenium	40	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA
<i>General Chemistry (ppb)</i>							
Cyanide, Total	100	NA	NA	NA	NA	NA	NA
Phenols	2000	NA	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA	NA	NA
Extractable Petroleum Hydrocarbons (EPH)							
EPH (C9 - C28)		NA	ND	NA	ND	NA	NA
EPH (>C28 - C40)		NA	ND	NA	ND	NA	NA
Total EPH (C9 - C40)		NA	ND	NA	ND	NA	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
 NA = Sample not analyzed for this analyte
 ND = Not detected

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number		MW-36D	MW-36D	MW-36D	MW-36D	MW-36D	MW-36D	MW-36D
Laboratory Sample Number		02619-002	JA74383-12	08490-002	JB7899-6	07590-007	05128-011	06447-004
Date Collected		03/22/2011	04/27/2011	08/30/2011	06/01/2012	08/06/2013	06/05/2014	07/23/2015
GC/MS Volatile Organics (ppb)	GWQS							
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	1	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	0.41	J	ND	ND	15.1
Toluene	600	ND	ND	ND	ND	ND	ND	2.12
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	1000	ND	ND	ND	ND	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		ND	ND	0.41	J	ND	ND	17.22
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	ND	ND	ND	ND	31.9 JN
GC/MS Semi-volatile Organics (ppb)								
bis(2-Chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	700	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	6000	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	100 a	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylexyl)phthalate	3	NA	NA	NA	NA	NA	NA	NA
Isophorone	40	NA	NA	NA	NA	NA	NA	NA
Naphthalene	300	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	10	NA	NA	NA	NA	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA	NA
PCBs (ppb)	0.5	NA	NA	NA	NA	NA	NA	NA
Metals Analysis (ppb)								
Antimony	6	NA	NA	NA	NA	NA	NA	NA
Arsenic	3	NA	NA	NA	NA	NA	NA	NA
Cadmium	4	NA	NA	NA	NA	NA	NA	NA
Chromium	70	NA	NA	NA	NA	NA	NA	NA
Copper	1300	NA	NA	NA	NA	NA	NA	NA
Lead	5	NA	NA	NA	NA	NA	NA	NA
Mercury	2	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA
Thallium	2	NA	NA	NA	NA	NA	NA	NA
Selenium	40	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA
General Chemistry (ppb)								
Cyanide, Total	100	NA	NA	NA	NA	NA	NA	NA
Phenols	2000	NA	NA	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA	NA	NA	NA
Extractable Petroleum Hydrocarbons (EPH)								
EPH (C9 - C28)		NA	ND	NA	NA	NA	NA	NA
EPH (>C28 - C40)		NA	ND	NA	NA	NA	NA	NA
Total EPH (C9 - C40)		NA	ND	NA	NA	NA	254	301 J
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
NA = Sample not analyzed for this analyte
ND = Not detected
N = Presumptive evidence of a compound from the use of GC/MS library search.

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number		MW-37D	MW-37D	MW-37D	MW-37D	MW-37D	MW-37D	MW-37D
Laboratory Sample Number		02619-003	JA74383-13	08515-005	JB7899-1	07590-008	05109-002	06541-009
Date Collected		03/22/2011	04/27/2011	08/31/2011	06/01/2012	08/06/2013	06/04/2014	07/24/2015
GC/MS Volatile Organics (ppb)		GWQS						
Acetone	6000	ND	ND	ND	14.8	ND	ND	ND
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	700	ND	ND	1.58	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	0.434 J	ND	26.1	2	ND	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	1	ND	ND	3.57	32.2	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND	1.2	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND
Benzene	1	1.04	4.7	8.08	1.4	0.706 J	0.748 J	ND
Toluene	600	ND	0.69 J	6.54	1.2	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	1000	ND	0.31 J	ND	ND	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		1.47 J	5.7 J	45.9	45.9	0.706 J	0.748 J	ND
TOTAL NON-TARGETED GC/MS Volatiles		8.7	ND	ND	ND	ND	ND	ND
GC/MS Semi-volatile Organics (ppb)								
bis(2-Chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	700	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	6000	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	100 a	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	3	NA	NA	NA	NA	NA	NA	NA
Isophorone	40	NA	NA	NA	NA	NA	NA	NA
Naphthalene	300	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	10	NA	NA	NA	NA	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA	NA
PCBs (ppb)		0.5	NA	NA	NA	NA	NA	NA
Metals Analysis (ppb)								
Antimony	6	NA	NA	NA	NA	NA	NA	NA
Arsenic	3	NA	NA	NA	NA	NA	NA	NA
Cadmium	4	NA	NA	NA	NA	NA	NA	NA
Chromium	70	NA	NA	NA	NA	NA	NA	NA
Copper	1300	NA	NA	NA	NA	NA	NA	NA
Lead	5	NA	NA	NA	NA	NA	NA	NA
Mercury	2	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA
Thallium	2	NA	NA	NA	NA	NA	NA	NA
Selenium	40	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA
General Chemistry (ppb)								
Cyanide, Total	100	NA	NA	NA	NA	NA	NA	NA
Phenols	2000	NA	NA	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA	NA	NA	NA
Extractable Petroleum Hydrocarbons (EPH)								
EPH (C9 - C28)		NA	ND	NA	NA	NA	NA	NA
EPH (>C28 - C40)		NA	ND	NA	NA	NA	NA	NA
Total EPH (C9 - C40)		NA	ND	NA	NA	NA	ND	NA
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
D = Indicates the concentration was reported from a diluted sample
NA = Sample not analyzed for this analyte
ND = Not detected

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number		MW-38D	MW-38D	MW-38D	MW-38D	MW-38D	MW-38D	MW-38D
Laboratory Sample Number		02619-001	JA74383-14	08490-001	JB7899-5	07590-009	05128-013	06447-011
Date Collected		03/22/2011	04/27/2011	08/30/2011	06/01/2012	08/06/2013	06/05/2014	07/23/2015
GC/MS Volatile Organics (ppb)	GWQS							
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND	ND
Chloromethane	NS	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	1	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	ND	386 J	ND	ND	ND	ND	ND
1,1-Dichloroethylene	1	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	70	132000	182000	227000	32900	57,300	103000	198000 D
trans-1,2-Dichloroethylene	100	ND	384 J	ND	79.7 J	ND	ND	ND
Vinyl chloride	1	56400	30900	53400	9740	13,300	24200	48000 D
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	2180	2200	4850	557	352 J	2250	1860 D
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND
Toluene	600	3970	7310	6660	339	1950	2770	6810 D
Ethylbenzene	700	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	1000	ND	572 J	ND	ND	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		195000	223752	292000	292000	72902 J	132000	255000 D
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	ND	ND	3,400	ND	ND
GC/MS Semi-volatile Organics (ppb)								
bis(2-Chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	700	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	6000	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	100 u	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	3	NA	NA	NA	NA	NA	NA	NA
Isophorone	40	NA	NA	NA	NA	NA	NA	NA
Naphthalene	300	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	10	NA	NA	NA	NA	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA	NA	NA	NA	NA	NA	NA
PCBs (ppb)	0.5	NA	NA	NA	NA	NA	NA	NA
Metals Analysis (ppb)								
Antimony	6	NA	NA	NA	NA	NA	NA	NA
Arsenic	3	NA	NA	NA	NA	NA	NA	NA
Cadmium	4	NA	NA	NA	NA	NA	NA	NA
Chromium	70	NA	NA	NA	NA	NA	NA	NA
Copper	1300	NA	NA	NA	NA	NA	NA	NA
Lead	5	NA	NA	NA	NA	NA	NA	NA
Mercury	2	NA	NA	NA	NA	NA	NA	NA
Nickel	100	NA	NA	NA	NA	NA	NA	NA
Thallium	2	NA	NA	NA	NA	NA	NA	NA
Selenium	40	NA	NA	NA	NA	NA	NA	NA
Zinc	2000	NA	NA	NA	NA	NA	NA	NA
General Chemistry (ppb)								
Cyanide, Total	100	NA	NA	NA	NA	NA	NA	NA
Phenols	2000	NA	NA	NA	NA	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA	NA	NA	NA	NA
Extractable Petroleum Hydrocarbons (EPH)								
EPH (C9 - C28)		NA	12300	NA	NA	NA	NA	NA
EPH (>C28 - C40)		NA	151	NA	NA	NA	NA	NA
Total EPH (C9 - C40)		NA	12500	NA	NA	NA	6890	10200
Chloride (mg/L)	250000	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA	NA	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL

NA = Sample not analyzed for this analyte

ND = Not detected

D = The compound was reported from the Diluted analysis

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number		MW-38DD	MW-38DD	MW-38DD
Laboratory Sample Number		05228-006	06418-001	06447-012
Date Collected		06/06/2014	07/10/2014	07/23/2015
GC/MS Volatile Organics (ppb)		GWQS		
Acetone	6000	5.79	ND	ND
Bromodichloromethane	1	ND	ND	ND
Chloroform	70	ND	ND	ND
Chloromethane	NS	ND	ND	ND
Methylene chloride	3	21.4	16.5	ND
Tetrachloroethylene	1	ND	ND	ND
Trichloroethylene	1	1.84	1.42	0.619 J
1,1-Dichloroethylene	1	ND	ND	ND
cis-1,2-Dichloroethylene	70	6.38	5.53	1.83
trans-1,2-Dichloroethylene	100	ND	ND	ND
Vinyl chloride	1	3.92	2.3	ND
1,1,1-Trichloroethane	30	0.935 J	ND	ND
1,1-Dichloroethane	50	0.674 J	ND	ND
1,2-Dichloroethane	2	ND	ND	ND
Chlorobenzene	50	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND
1,2-Dichloropropane	1	ND	ND	ND
Benzene	1	ND	ND	ND
Toluene	600	0.891 J	ND	ND
Ethylbenzene	700	ND	ND	ND
Xylenes (total)	1000	ND	ND	ND
TOTAL TARGETED GC/MS Volatiles		41.83	25.75	2.449 J
TOTAL NON-TARGETED GC/MS Volatiles		ND	ND	ND
GC/MS Semi-volatile Organics (ppb)				
bis(2-Chloroethyl)ether	7	NA	NA	NA
1,2-Dichlorobenzene	600	NA	NA	NA
1,4-Dichlorobenzene	75	NA	NA	NA
Di-n-butyl phthalate	700	NA	NA	NA
Diethyl phthalate	6000	NA	NA	NA
Dimethyl phthalate	100 a	NA	NA	NA
bis(2-Ethylhexyl)phthalate	3	NA	NA	NA
Isophorone	40	NA	NA	NA
Naphthalene	300	NA	NA	NA
N-Nitrosodiphenylamine	10	NA	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA	NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA	NA	NA
PCBs (ppb)		0.5	NA	NA
Metals Analysis (ppb)				
Antimony	6	NA	NA	NA
Arsenic	3	NA	NA	NA
Cadmium	4	NA	NA	NA
Chromium	70	NA	NA	NA
Copper	1300	NA	NA	NA
Lead	5	NA	NA	NA
Mercury	2	NA	NA	NA
Nickel	100	NA	NA	NA
Thallium	2	NA	NA	NA
Selenium	40	NA	NA	NA
Zinc	2000	NA	NA	NA
General Chemistry (ppb)				
Cyanide, Total	100	NA	NA	NA
Phenols	2000	NA	NA	NA
Petroleum Hydrocarbons	NN	NA	NA	NA
Extractable Petroleum Hydrocarbons (EPH)				
EPH (C9 - C28)				
EPH (>C28 - C40)				
Total EPH (C9 - C40)		207	NA	227 J
Chloride (mg/L)	250000	NA	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
NA = Sample not analyzed for this analyte
ND = Not detected

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number	MW-39D	MW-39D
Laboratory Sample Number	05228-004	06541-012
Date Collected	06/06/2014	07/24/2015
GC/MS Volatile Organics (ppb)	GWQS	
Acetone	6000	ND ND
Bromodichloromethane	1	ND ND
Chloroform	70	ND ND
Chloromethane	NS	ND ND
Methylene chloride	3	133000 ND
Tetrachloroethylene	1	ND ND
Trichloroethylene	1	559000 944000 D
1,1-Dichloroethylene	1	ND ND
cis-1,2-Dichloroethylene	70	15500 7150 D
trans-1,2-Dichloroethylene	100	ND ND
Vinyl chloride	1	ND ND
1,1,1-Trichloroethane	30	ND ND
1,1-Dichloroethane	50	ND ND
1,2-Dichloroethane	2	ND ND
Chlorobenzene	50	ND ND
1,2-Dichlorobenzene	600	ND ND
1,4-Dichlorobenzene	75	ND ND
1,2-Dichloropropane	1	ND ND
Benzene	1	ND ND
Toluene	600	35600 75000 D
Ethylbenzene	700	ND ND
Xylenes (total)	1000	ND ND
TOTAL TARGETED GC/MS Volatiles		74300 1030000 D
TOTAL NON-TARGETED GC/MS Volatiles		ND ND
GC/MS Semi-volatile Organics (ppb)		
bis(2-Chloroethyl)ether	7	NA NA
1,2-Dichlorobenzene	600	NA NA
1,4-Dichlorobenzene	75	NA NA
Di-n-butyl phthalate	700	NA NA
Diethyl phthalate	6000	NA NA
Dimethyl phthalate	100 n	NA NA
bis(2-Ethylexyl)phthalate	3	NA NA
Isophorone	40	NA NA
Naphthalene	300	NA NA
N-Nitrosodiphenylamine	10	NA NA
TOTAL TARGETED GC/MS Semi-volatiles		NA NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA NA
PCBs (ppb)	0.5	NA NA
Metals Analysis (ppb)		
Antimony	6	NA NA
Arsenic	3	NA NA
Cadmium	4	NA NA
Chromium	70	NA NA
Copper	1300	NA NA
Lead	5	NA NA
Mercury	2	NA NA
Nickel	100	NA NA
Thallium	2	NA NA
Selenium	40	NA NA
Zinc	2000	NA NA
General Chemistry (ppb)		
Cyanide, Total	100	NA NA
Phenols	2000	NA NA
Petroleum Hydrocarbons	NN	NA NA
Extractable Petroleum Hydrocarbons (EPH)		
EPH (C9 - C28)		NA NA
EPH (>C28 - C40)		NA NA
Total EPH (C9 - C40)		44300 31800 D
Chloride (mg/L)	250000	NA NA
Total Dissolved Solids (mg/L)	500000	NA NA

J = Indicates the concentration was reported below the RL but above the MDL
NA = Sample not analyzed for this analyte
ND = Not detected

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number	MW-40D		MW-40D
Laboratory Sample Number	05128-016		06447-003
Date Collected	06/05/2014		07/23/2015
GC/MS Volatile Organics (ppb)	GWQS		
Acetone	6000	8.54	ND
Bromodichloromethane	1	ND	ND
Chloroform	70	ND	ND
Chloromethane	NS	ND	ND
Methylene chloride	3	ND	ND
Tetrachloroethylene	1	ND	ND
Trichloroethylene	1	ND	ND
1,1-Dichloroethylene	1	ND	ND
cis-1,2-Dichloroethylene	70	ND	ND
trans-1,2-Dichloroethylene	100	ND	ND
Vinyl chloride	1	ND	ND
1,1,1-Trichloroethane	30	ND	ND
1,1-Dichloroethane	50	ND	ND
1,2-Dichloroethane	2	ND	ND
Chlorobenzene	50	5.55	2.80
1,2-Dichlorobenzene	600	ND	ND
1,4-Dichlorobenzene	75	ND	ND
1,2-Dichloropropane	1	ND	ND
Benzene	1	ND	ND
Toluene	600	7.37	0.469 J
Ethylbenzene	700	2.2	ND
Xylenes (total)	1000	4.85	ND
TOTAL TARGETED GC/MS Volatiles		28.5	3.269 J
TOTAL NON-TARGETED GC/MS Volatiles		180 J	7.3 JN
GC/MS Semi-volatile Organics (ppb)			
bis(2-Chloroethyl)ether	7	NA	NA
1,2-Dichlorobenzene	600	NA	NA
1,4-Dichlorobenzene	75	NA	NA
Di-n-butyl phthalate	700	NA	NA
Diethyl phthalate	6000	NA	NA
Dimethyl phthalate	100 a	NA	NA
bis(2-Ethylexyl)phthalate	3	NA	NA
Isophorone	40	NA	NA
Naphthalene	300	NA	NA
N-Nitrosodiphenylamine	10	NA	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA	NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA	NA
PCBs (ppb)	0.5	NA	NA
Metals Analysis (ppb)			
Antimony	6	NA	NA
Arsenic	3	NA	NA
Cadmium	4	NA	NA
Chromium	70	NA	NA
Copper	1300	NA	NA
Lead	5	NA	NA
Mercury	2	NA	NA
Nickel	100	NA	NA
Thallium	2	NA	NA
Selenium	40	NA	NA
Zinc	2000	NA	NA
General Chemistry (ppb)			
Cyanide, Total	100	NA	NA
Phenols	2000	NA	NA
Petroleum Hydrocarbons	NN	NA	NA
Extractable Petroleum Hydrocarbons (EPH)			
EPH (C9 - C28)		NA	NA
EPH (>C28 - C40)		NA	NA
Total EPH (C9 - C40)		883	266 J
Chloride (mg/L)	250000	NA	NA
Total Dissolved Solids (mg/L)	500000	NA	NA

J = Indicates the concentration was reported below the RL but above the MDL
NA = Sample not analyzed for this analyte
ND = Not detected
N = Presumptive evidence of a compound from the use of GC/MS library search.

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number	MW-41D	MW-41D
Laboratory Sample Number	05128-010	06541-010
Date Collected	06/05/2014	07/24/2015
GC/MS Volatile Organics (ppb)	GWQS	
Bromodichloromethane	1	ND
Chloroform	70	ND
Chloromethane	NS	ND
Methylene chloride	3	ND
Tetrachloroethylene	1	ND
Trichloroethylene	1	1.87
1,1-Dichloroethylene	1	ND
cis-1,2-Dichloroethylene	70	34.9
trans-1,2-Dichloroethylene	100	0.5
Vinyl chloride	1	13.2
1,1,1-Trichloroethane	30	ND
1,1-Dichloroethane	50	1.56
1,2-Dichloroethane	2	ND
Chlorobenzene	50	ND
1,2-Dichlorobenzene	600	ND
1,4-Dichlorobenzene	75	ND
1,2-Dichloropropane	1	ND
Benzene	1	1.51
Toluene	600	1.22
Ethylbenzene	700	ND
Xylenes (total)	1000	ND
TOTAL TARGETED GC/MS Volatiles		54.8
TOTAL NON-TARGETED GC/MS Volatiles		ND
GC/MS Semi-volatile Organics (ppb)		
bis(2-Chloroethyl)ether	7	NA
1,2-Dichlorobenzene	600	NA
1,4-Dichlorobenzene	75	NA
Di-n-butyl phthalate	700	NA
Diethyl phthalate	6000	NA
Dimethyl phthalate	100 a	NA
bis(2-Ethylhexyl)phthalate	3	NA
Isophorone	40	NA
Naphthalene	300	NA
N-Nitrosodiphenylamine	10	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA
PCBs (ppb)	0.5	NA
Metals Analysis (ppb)		
Antimony	6	NA
Arsenic	3	NA
Cadmium	4	NA
Chromium	70	NA
Copper	1300	NA
Lead	5	NA
Mercury	2	NA
Nickel	100	NA
Thallium	2	NA
Selenium	40	NA
Zinc	2000	NA
General Chemistry (ppb)		
Cyanide, Total	100	NA
Phenols	2000	NA
Petroleum Hydrocarbons	NN	NA
Extractable Petroleum Hydrocarbons (EPH)		
EPH (C9 - C28)		NA
EPH (>C28 - C40)		NA
Total EPH (C9 - C40)		273
Chloride (mg/L)	250000	NA
Total Dissolved Solids (mg/L)	500000	NA

J = Indicates the concentration was reported below the RL but above the MDL
 NA = Sample not analyzed for this analyte
 ND = Not detected

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number	MW-42D	MW-42D
Laboratory Sample Number	05109-001	06541-011
Date Collected	06/04/2014	07/24/2015
GC/MS Volatile Organics (ppb)	GWQS	
Bromodichloromethane	1	ND ND
Chloroform	70	ND ND
Chloromethane	NS	ND ND
Methylene chloride	3	25.7 ND
Tetrachloroethylene	1	ND ND
Trichloroethylene	1	206 D 4.11
1,1-Dichloroethylene	1	2.54 ND
cis-1,2-Dichloroethylene	70	41.3 2.41
trans-1,2-Dichloroethylene	100	0.975 J ND
Vinyl chloride	1	5.79 ND
1,1,1-Trichloroethane	30	50.3 ND
1,1-Dichloroethane	50	10.6 1.30
1,2-Dichloroethane	2	ND ND
Chlorobenzene	50	7.15 ND
1,2-Dichlorobenzene	600	40.1 ND
1,4-Dichlorobenzene	75	ND ND
1,2-Dichloropropane	1	ND ND
Benzene	1	30.1 0.895 J
Toluene	600	44.2 ND
Ethylbenzene	700	3.7 ND
Xylenes (total)	1000	15.3 ND
TOTAL TARGETED GC/MS Volatiles		484 J 8.72 J
TOTAL NON-TARGETED GC/MS Volatiles		75.2 J ND
GC/MS Semi-volatile Organics (ppb)		
bis(2-Chloroethyl)ether	7	NA NA
1,2-Dichlorobenzene	600	NA NA
1,4-Dichlorobenzene	75	NA NA
Di-n-butyl phthalate	700	NA NA
Diethyl phthalate	6000	NA NA
Dimethyl phthalate	100 a	NA NA
bis(2-Ethylhexyl)phthalate	3	NA NA
Isophorone	40	NA NA
Naphthalene	300	NA NA
N-Nitrosodiphenylamine	10	NA NA
TOTAL TARGETED GC/MS Semi-volatiles		NA NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA NA
PCBs (ppb)	0.5	NA NA
Metals Analysis (ppb)		
Antimony	6	NA NA
Arsenic	3	NA NA
Cadmium	4	NA NA
Chromium	70	NA NA
Copper	1300	NA NA
Lead	5	NA NA
Mercury	2	NA NA
Nickel	100	NA NA
Thallium	2	NA NA
Selenium	40	NA NA
Zinc	2000	NA NA
General Chemistry (ppb)		
Cyanide, Total	100	NA NA
Phenols	2000	NA NA
Petroleum Hydrocarbons	NN	NA NA
Extractable Petroleum Hydrocarbons (EPH)		
EPH (C9 - C28)		NA NA
EPH (>C28 - C40)		NA NA
Total EPH (C9 - C40)		498 ND
Chloride (mg/L)	250000	NA NA
Total Dissolved Solids (mg/L)	500000	NA NA

J = Indicates the concentration was reported below the RL but above the MDL
 NA = Sample not analyzed for this analyte
 ND = Not detected
 D = The compound was reported from the diluted analysis

TABLE 5 (cont'd.)
ARSYNCO, INC.
COMPREHENSIVE GROUNDWATER RESULTS SUMMARY

Sample Number	MW-43D	
Laboratory Sample Number	06541-013	
Date Collected	07/24/2015	
GC/MS Volatile Organics (ppb)	GWQS	
Bromodichloromethane	1	ND
Chloroform	70	ND
Chloromethane	NS	ND
Methylene chloride	3	ND
Tetrachloroethylene	1	ND
Trichloroethylene	1	ND
1,1-Dichloroethylene	1	ND
cis-1,2-Dichloroethylene	70	ND
trans-1,2-Dichloroethylene	100	ND
Vinyl chloride	1	ND
1,1,1-Trichloroethane	30	ND
1,1-Dichloroethane	50	ND
1,2-Dichloroethane	2	ND
Chlorobenzene	50	ND
1,2-Dichlorobenzene	600	ND
1,4-Dichlorobenzene	75	ND
1,2-Dichloropropane	1	ND
Benzene	1	ND
Toluene	600	ND
Ethylbenzene	700	ND
Xylenes (total)	1000	ND
2-Butanone (MEK)	300	ND
Acetone	6000	ND
Isopropyl Benzene	700	ND
TOTAL TARGETED GC/MS Volatiles		ND
TOTAL NON-TARGETED GC/MS Volatiles		ND
GC/MS Semi-volatile Organics (ppb)		
bis(2-Chloroethyl)ether	7	NA
1,2-Dichlorobenzene	600	NA
1,4-Dichlorobenzene	75	NA
Di-n-butyl phthalate	700	NA
Diethyl phthalate	6000	NA
Dimethyl phthalate	100	NA
bis(2-Ethylexyl)phthalate	3	NA
Isophorone	40	NA
Naphthalene	300	NA
N-Nitrosodiphenylamine	10	NA
TOTAL TARGETED GC/MS Semi-volatiles		NA
TOTAL NON-TARGETED GC/MS Semi-volatiles		NA
PCBs (ppb)	0.5	NA
Metals Analysis (ppb)		
Antimony	6	NA
Arsenic	3	NA
Cadmium	4	NA
Chromium	70	NA
Copper	1300	NA
Lead	5	NA
Mercury	2	NA
Nickel	100	NA
Thallium	2	NA
Selenium	40	NA
Zinc	2000	NA
General Chemistry (ppb)		
Cyanide, Total	100	NA
Phenols	2000	NA
Petroleum Hydrocarbons	NN	NA
Extractable Petroleum Hydrocarbons (EPH)		
EPH (C9 - C28)		NA
EPH (>C28 - C40)		NA
Total EPH (C9 - C40)		ND
Chloride (mg/L)	250000	NA
Total Dissolved Solids (mg/L)	500000	NA

J = Indicates the concentration was reported below the RL but above the MDL
NA = Sample not analyzed for this analyte
ND = Not detected

TABLE 6
ARSYNCO, INC. CARLSTADT, NJ
ANALYTICAL METHODS/QUALITY ASSURANCE SUMMARY

Sample ID	Date	Matrix	Analytical Parameters	Analytical Methods	Preserve	Holding Time
MW-43D	04/13/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-44DD	04/13/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-4S	07/23/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-5S	07/24/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-8S	07/24/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-8D	07/24/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-11S(R)	07/22/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-11D	07/22/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-11DD	07/22/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-12S	07/24/15	GW	TCL VO+15, Ni	8260C, 6020A	HCL, HN03	14 Days, 180 Days
MW-12D	07/24/15	GW	TCL VO+15, TCLBN+15	8260C, 8270D SIM	HCL/NONE	14 Days, 7 Days extract 40 Days Analysis
MW-13S(R)	07/23/15	GW	TCL VO+15, EPH, Sb, Pb, Ni	8260C, Method 10.08 Rev 3, 6020A	HCL, HCL, HN03	14 Days, 14 Days, 180 Days
MW-15D	07/24/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-16D	07/22/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-17D	07/22/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-18D	07/22/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-22S	07/24/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-22D	07/24/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-23S	07/24/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-23D	07/24/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-24S	07/23/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-27S	07/22/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-29S	07/23/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-29D	07/23/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-31S	07/23/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-33S	07/23/15	GW	TCL VO+15, EPH, Sb, Pb, Ni, Zn	8260C, Method 10.08 Rev 3, 6020A	HCL, HCL, HN03	14 Days, 14 Days, 180 Days
MW-34S	07/22/15	GW	TCL VO+15, EPH, Pb, Ni	8260C, Method 10.08 Rev 3, 6020A	HCL, HCL, HN03	14 Days, 14 Days, 180 Days
MW-34D	07/23/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-36D	07/23/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-37D	07/24/15	GW	TCL VO+15	8260C	HCL	14 Days
MW-38D	07/23/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-38DD	07/23/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-39D	07/24/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-40D	07/23/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-41D	07/24/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-42D	07/24/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
MW-43D	07/24/15	GW	TCL VO+15, EPH	8260C, Method 10.08 Rev 3	HCL, HCL	14 Days, 14 Days
IV-10 A	03/15/16	SOIL	Pb	6020A	NONE	180 Days



Scale 1:24,000

Source: USGS Topo Quad. - Weehawken Quad,
Photorevised 1981

Site Coordinates: Latitude: 040° 50' 8.32\" N
Longitude: 074° 05' 0.58\" W

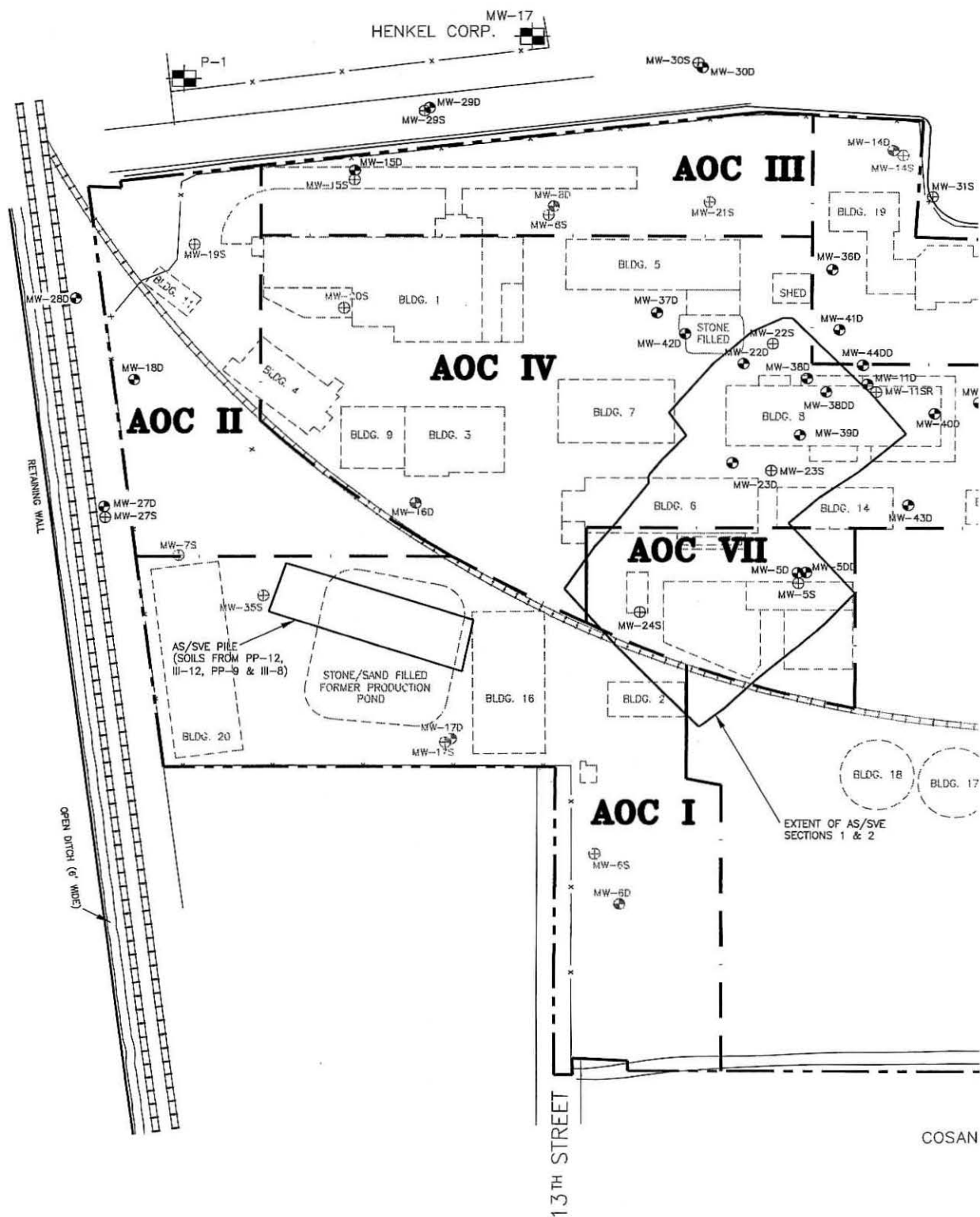
SITE LOCATION MAP

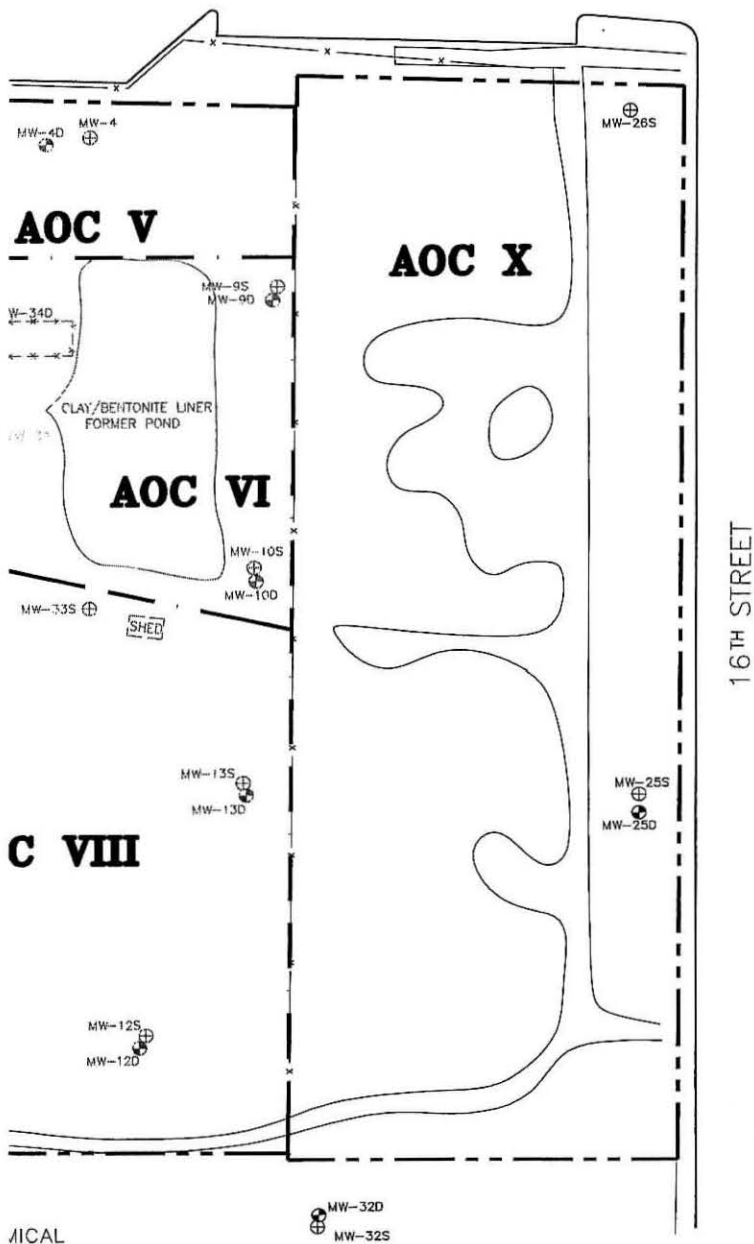
Arsynco, Inc. Property
511 13th Street
Carlstadt, New Jersey

FIGURE 1

JMC Environmental Consultants, Inc.

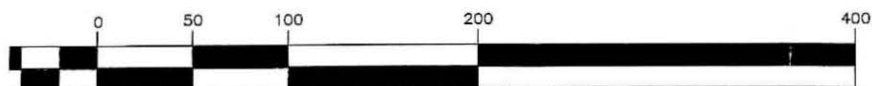
2109 Bridge Ave., Bldg. B
Point Pleasant, New Jersey 08742





MICAL

GRAPHIC SCALE



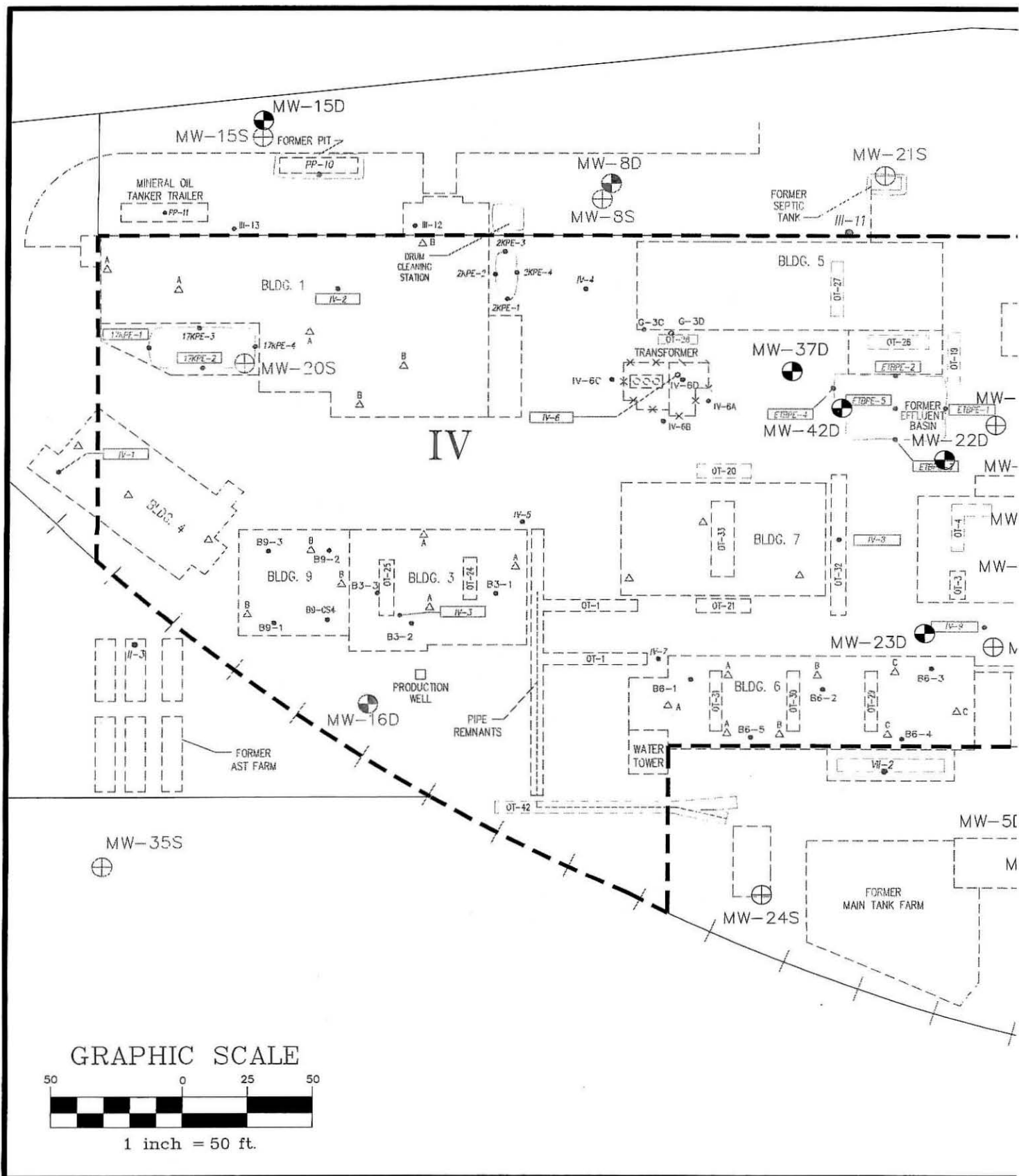
(IN FEET)
1 inch = 100 ft.

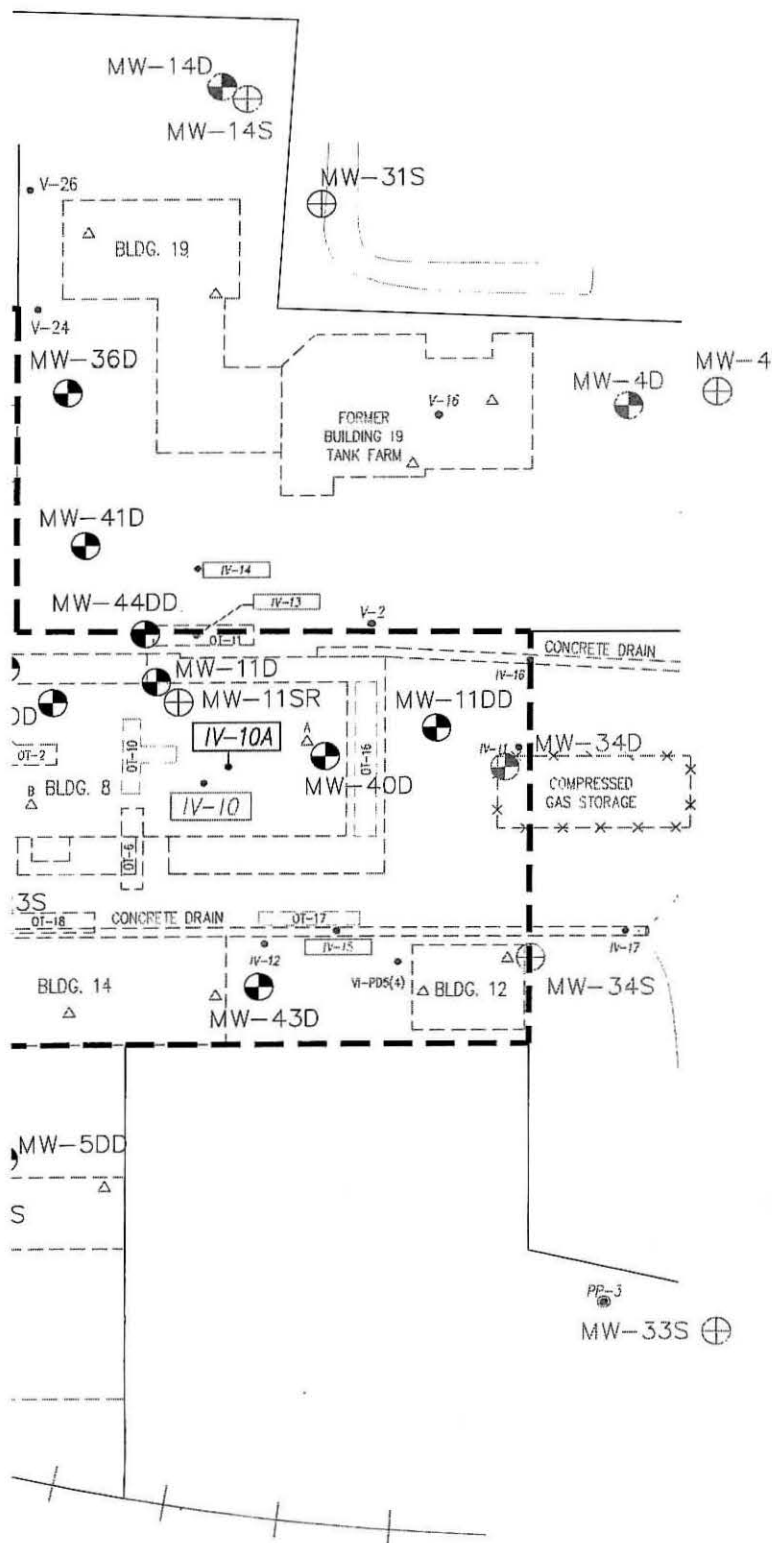
LEGEND:

- ⊕ - SHALLOW MONITORING WELLS
- - DEEP MONITORING WELLS
- ⊕⊙ - RECENTLY ABANDONED MWS
- - - - - FORMER SITE STRUCTURES

ARSYNCO
SITE PLAN SHOWING
AREAS OF CONCERN

FIGURE: 2 | SCALE: 1" = 100'
JMC ENVIRONMENTAL CONSULTANTS, INC.
2109 BRIDGE AVE., BUILDING B
POINT PLEASANT, NEW JERSEY 08742



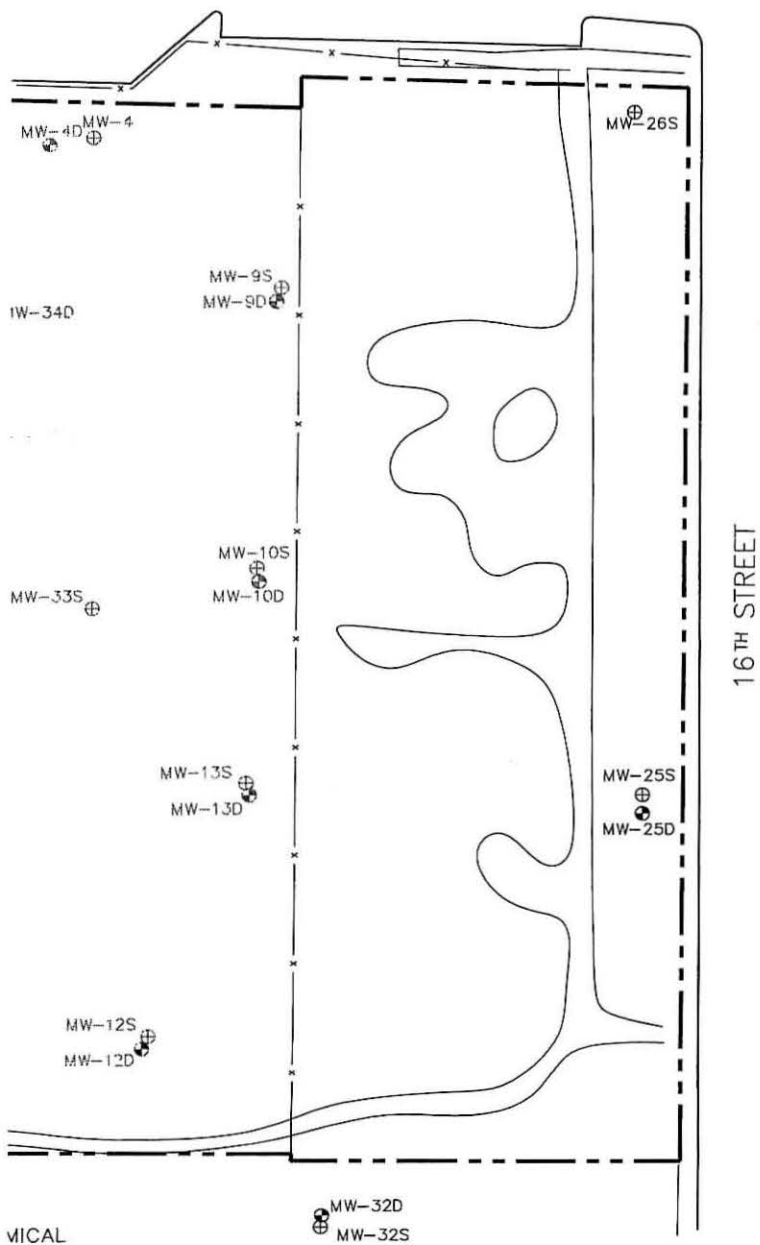


LEGEND:

- - SOIL BORING LOCATION
- - HISTORIC SOIL BORING LOCATION
- ⊕ - SHALLOW MONITORING WELLS
- ⊗ - DEEP MONITORING WELLS
- ⊕⊗ - RECENTLY ABANDONED MWS

ARSYNCO AREA IV SOIL SAMPLE LOCATION MAP

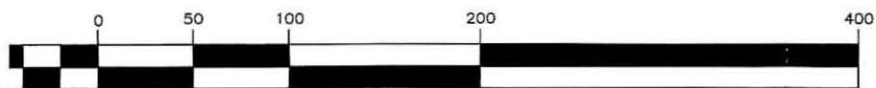
FIGURE: 3 | SCALE: 1" = 50'
 JMC ENVIRONMENTAL CONSULTANTS, INC.
 2109 BRIDGE AVE., BUILDING B
 POINT PLEASANT, NEW JERSEY 08742



LEGEND:

- ⊕ - SHALLOW MONITORING WELLS
- - DEEP MONITORING WELLS
- ⊕⊙ - RECENTLY ABANDONED MWS

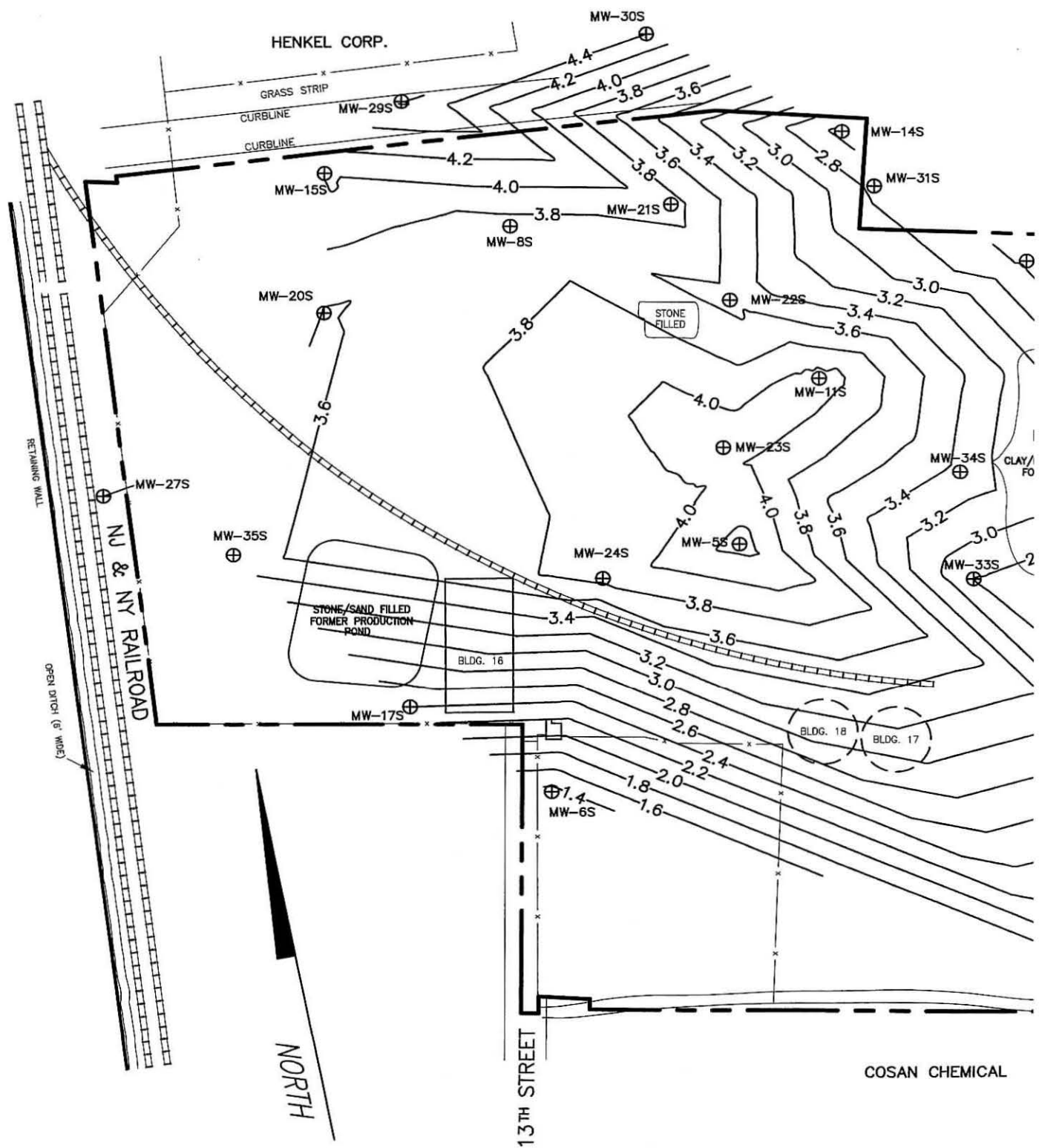
GRAPHIC SCALE



(IN FEET)
1 inch = 100 ft.

ARSYNCO MONITORING WELL LOCATION MAP

FIGURE: 4 SCALE: 1" = 100'
JMC ENVIRONMENTAL CONSULTANTS, INC.
2109 BRIDGE AVE., BUILDING B
POINT PLEASANT, NEW JERSEY 08742



LEGEND:

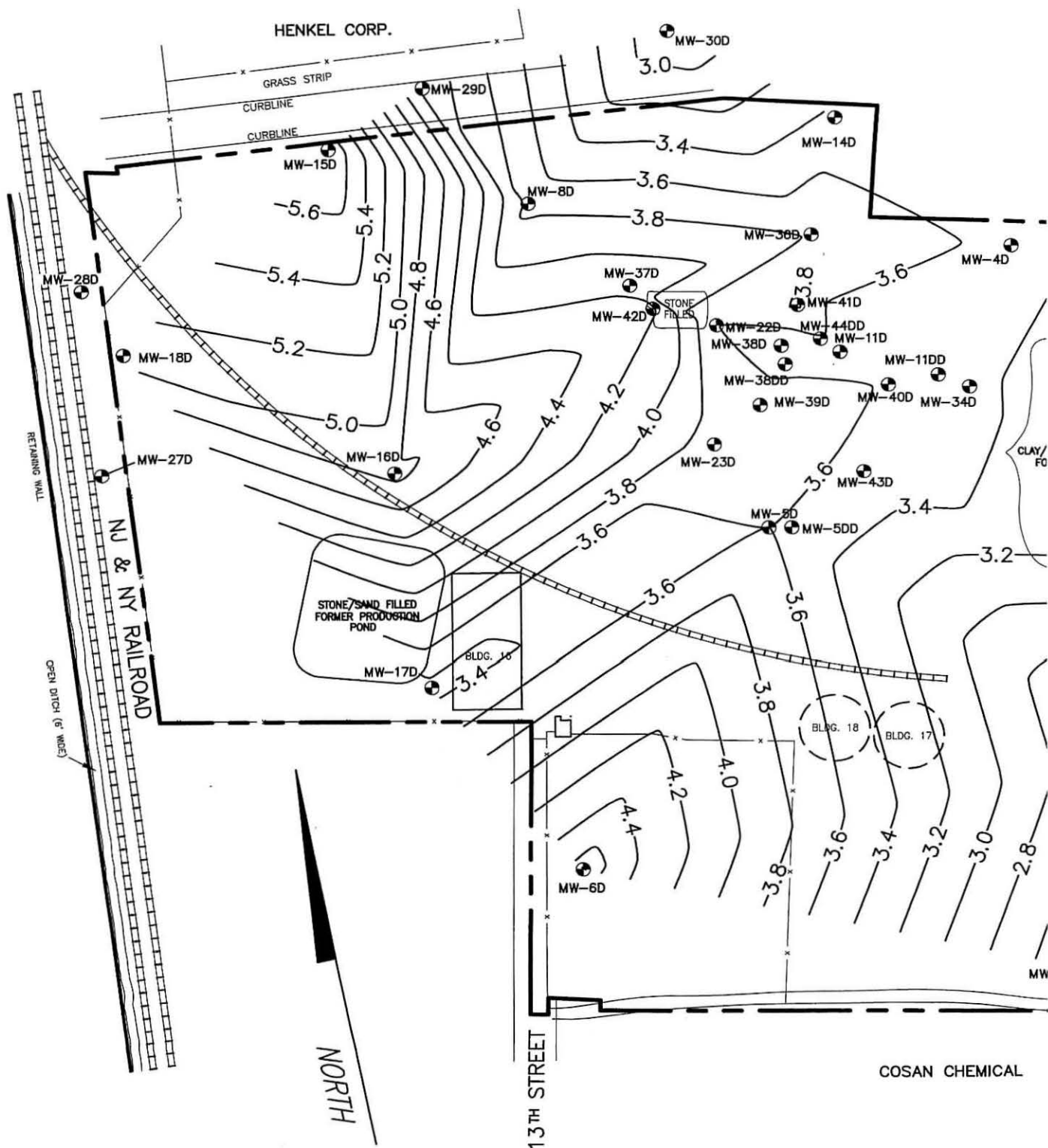
⊕ - SHALLOW MONITORING WELLS



Age Group	50	100	200	400
18-24	~100%	~100%	~100%	~100%
25-34	~100%	~100%	~100%	~100%
35-44	~100%	~100%	~100%	~100%
45-54	~100%	~100%	~100%	~100%
55-64	~100%	~100%	~100%	~100%
65+	~100%	~100%	~100%	~100%

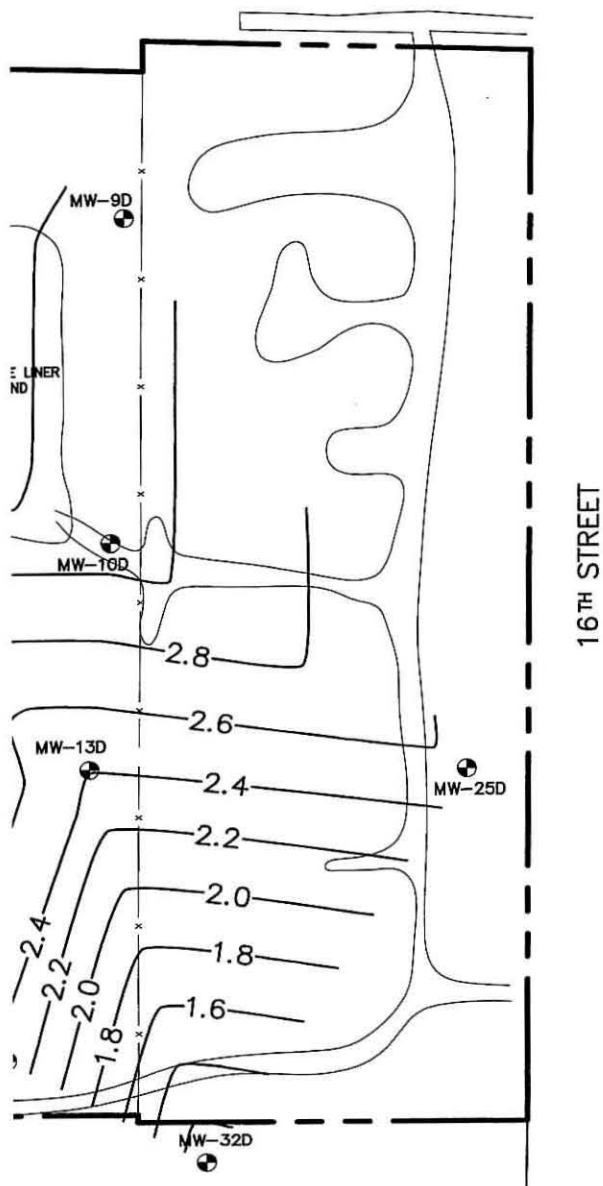
Well Number	Groundwater Elevation
MW-4S	2.56
MW-5S	4.27
MW-6S	1.34
MW-8S	3.71
MW-9S	2.39
MW-10S	2.53
MW-11SR	4.13
MW-12S	1.86
MW-13S	2.85
MW-14S	2.54
MW-15S	4.02
MW-17S	2.40
MW-20S	3.58
MW-21S	3.88
MW-22S	3.54
MW-23S	4.13
MW-24S	3.85
MW-25S	0.79
MW-26S	2.20
MW-27S	5.54
MW-29S	4.62
MW-30S	4.40
MW-31S	2.74
MW-33S	2.80
MW-34S	3.35
MW-35S	3.56

2109 BRIDGE AVENUE, BUILDING B
POINT PLEASANT, NEW JERSEY 08742

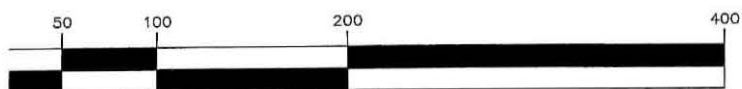


LEGEND:

● - DEEP MONITORING WELLS



GRAPHIC SCALE



(IN FEET)
1 inch = 100 ft.

Well Number	Groundwater Elevation
MW-4D	3.54
MW-5D	3.60
MW-6D	4.61
MW-8D	3.74
MW-9D	3.08
MW-10D	3.09
MW-11D	3.47
MW-12D	2.34
MW-13D	2.41
MW-14D	3.44
MW-15D	5.78
MW-16D	4.86
MW-17D	3.33
MW-18D	5.09
MW-22D	3.61
MW-23D	3.69
MW-25D	2.55
MW-29D	4.15
MW-30D	2.82
MW-32D	1.06
MW-34D	3.46
MW-36D	3.78
MW-37D	4.16
MW-38D	3.44
MW-39D	3.74
MW-40D	3.58
MW-41D	3.82
MW-42D	4.22
MW-43D	3.55

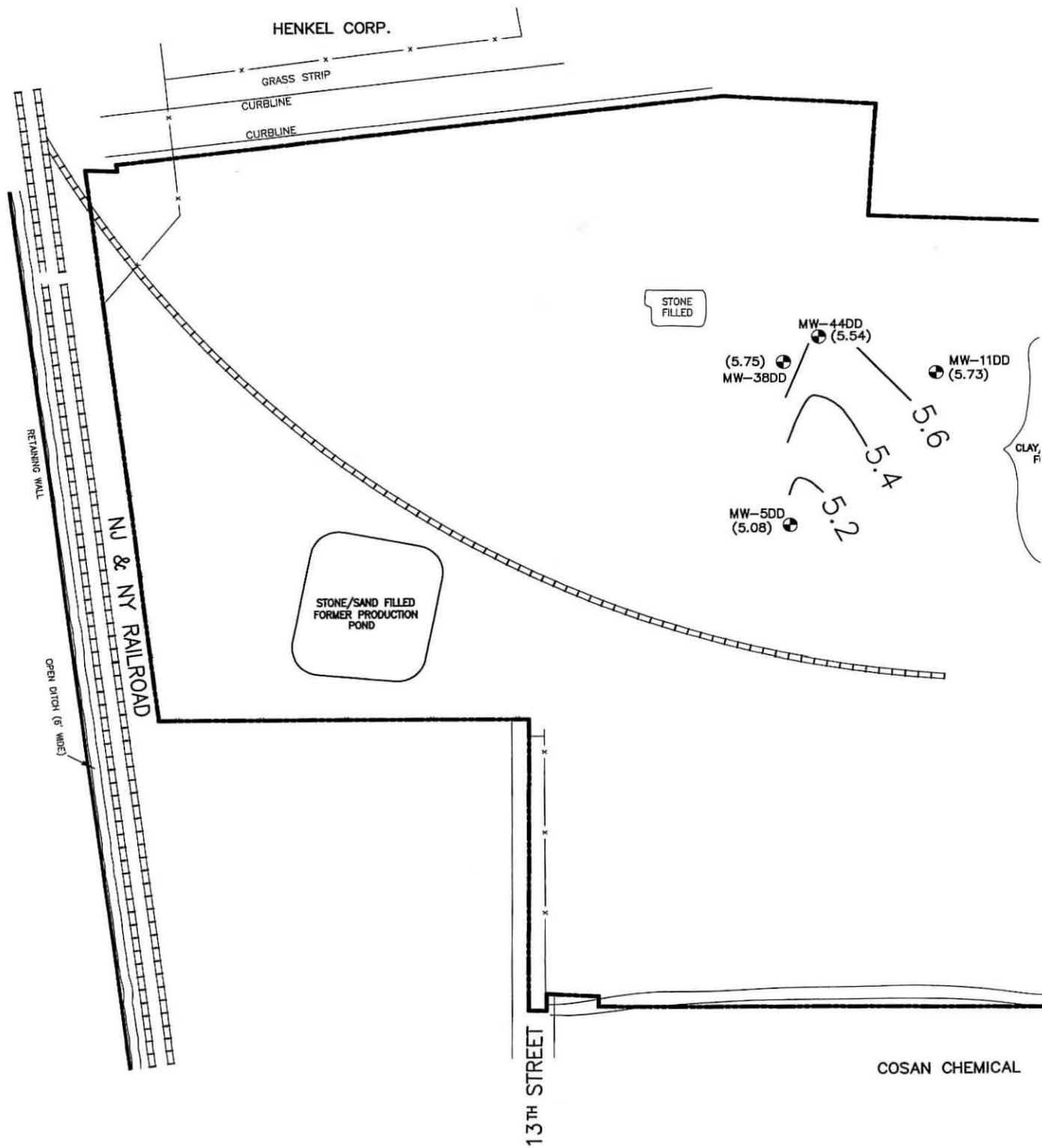
ARSYNCO
PIEZOMETRIC SURFACE MAP
FOR THE DEEP ZONE
JULY 22, 2015

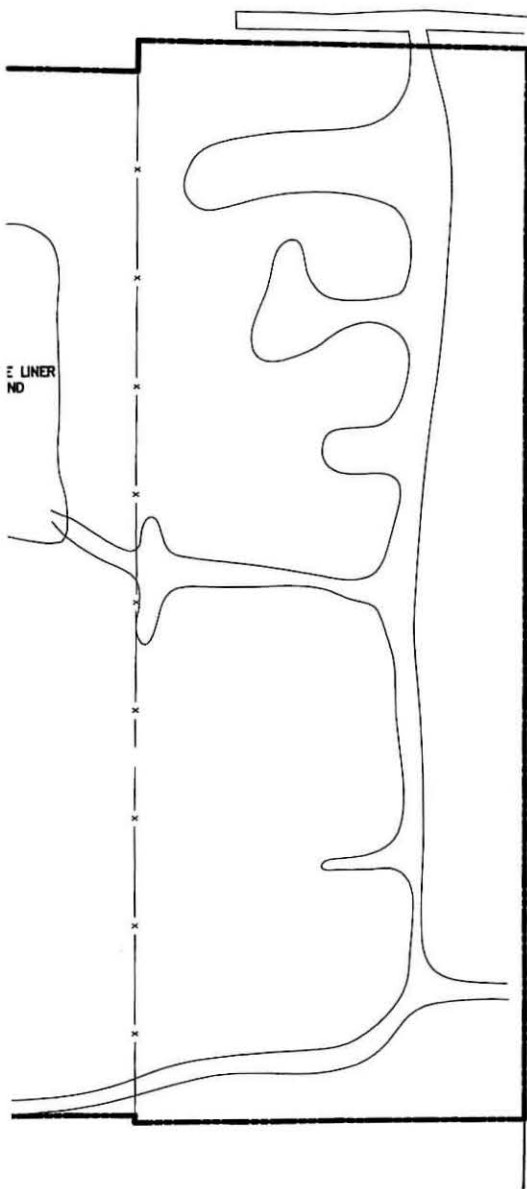
FIGURE: 6

SCALE: 1" = 100'

JMC ENVIRONMENTAL CONSULTANTS, INC.

2109 BRIDGE AVENUE, BUILDING B
POINT PLEASANT, NEW JERSEY 08742





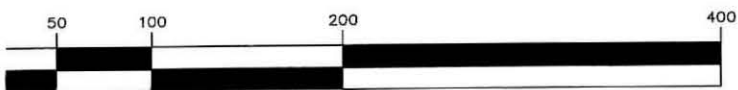
16TH STREET

NORTH

LEGEND:

⊕ - DEEP DEEP MONITORING WELLS

GRAPHIC SCALE



(IN FEET)
1 inch = 100 ft.

ARSYNCO

PIEZOMETRIC SURFACE MAP
FOR THE DEEP DEEP ZONE
JULY 22, 2015

FIGURE: 7

SCALE: 1" = 100'

JMC ENVIRONMENTAL CONSULTANTS, INC.

2109 BRIDGE AVENUE, BUILDING B
POINT PLEASANT, NEW JERSEY 08742